

NEW WORLDS SCIENCE FICTION

No. 50

2/-



NEW WORLDS

— PROFILES —

ALAN BARCLAY

"Recently a patient reader asked whether I had any idea how the Jacko series was to end," writes Alan Barclay. "The fact is, I have known since the first story, including the reasons for the Jackoes' arrival within our solar system and the final solution to the problem. Indeed, the complete idea was set out about ten years ago (in an entirely unpublished story which your editor wisely rejected at that time). Of course, each adventure and the characters that go with it have been developed and fitted into the general picture later.

"For myself, I am sorry the series has ended, for I have reached the point (almost) of believing the whole situation is true and that the Jackoes are really with us. However, I realise that by this time readers are entitled to be told what it is all about and given a chance of judging the stories as a whole."



J. T. McINTOSH

"*Empath* is one of those stories," states the author of our lead story this month, "which some people consider new and original and others regard as the same old line merely given a new twist. What do you do with a new idea, anyway? Do you plug it until everybody is sick of it, or do you toss it out casually and be accused of wasting a good idea?"

"In this story I have gone back to one of the basic things in science fiction—the situation being that someone finds he can do something different. I believe that the idea of empathy has a firmer believe in common experience than telepathy or clairvoyance. We are all to some extent sensitive to atmosphere—we can all sense danger, and the more we have experienced danger the more we trust this instinct. Whether *Empath* is a good story or not, it is one that somebody had to write sooner or later."

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Anniversary

During recent weeks a number of readers have written to us and pointed out that we are approaching an anniversary—the publication of our 50th issue—and expressing the hope that we may be producing some kind of special issue to commemorate the occasion. I will confess that I had not attached any importance to the advent of the issue you now have in your hands—in fact it was quite a surprise to realise that we had reached the half-century in published issues. Such a special issue, however, would have needed planning over six months ago and even then I doubt very much whether the hypothetical contents of such an issue would be of a higher average level than those presented for your reading pleasure herein.

If I can judge from the correspondence that does arrive each month we seem to have been averaging a fairly good level in both plot and literary ability during the past year, despite the fact that most of the leading British writers have not been producing short stories in the science fiction medium during that period.

However, these reminders that we have an anniversary gave me a bigger surprise than perhaps any of the writers realised—this month's issue also pinpoints ten years to the month since the first issue of *New Worlds* was published! Perhaps that *does* call for some kind of celebration as we have weathered some rather violent storms in the publishing field one way or another since those early post-war days. That first issue—a copy lies on the desk in front of me as I write—is a totally different magazine to the issue you now have. It was a 64-page, large-size issue, priced at 2/- during that difficult period of paper rationing, was listed as an “irregular publication,” and had a different publisher's imprint on the title page.

The two lead stories were by Maurice G. Hugi—long a stalwart writer of British science fiction and regrettably no longer with us to enjoy the comparative pleasure of a regular publication—and William F. Temple, who is still regularly writing this type of fiction. To produce that issue I had to read over half a million words of MSS! An accumulation of material, most of it written during odd moments in the war, by authors who had practically no chance of selling it elsewhere than in the depleted American market. The general standard of the stories was extremely poor when compared with that of today. Yet, despite the fact that the magazine was only to be published occasionally, it was a beginning and one that has certainly been well worth while.

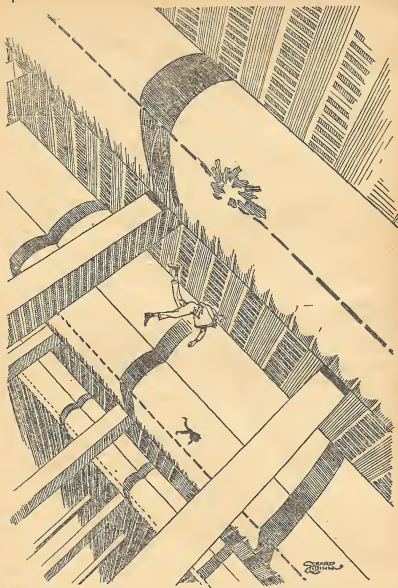
Three issues were published between 1946 and 1948 and then there was a change of ownership and Nova Publications took the magazine over (a Company formed specially for the purpose) and we went quarterly. It was at this time we found Bob Clothier for our cover work—the first artist who had any “feel” for the specialised medium. Gerard Quinn joined us during 1951 for interior illustrations and when we went bi-monthly in 1952 he took over cover work and has remained our main artist ever since. Meanwhile, in 1951, *Science Fantasy* had been added to our list and has remained a steady favourite ever since.

Then in January 1954 the Company was reorganised and *New Worlds* became a regularly monthly publication and since then I feel that we really have steadily improved and produced some very fine fiction. Undoubtedly this magazine has been a great force in the development of British science fiction (despite or because of the occasional story by an American writer) and many new writers have come to us and become first-class exponents of British thought and style. Our serials have all been above average—some even outstanding—and I have now lost count of the number of short stories which have been chosen from our two magazines and either anthologised or republished elsewhere. The quality must have been there in the first place to make other editors notice them.

Looking into our publishing future seems very interesting from here—the success of Ian Wrights' recent serial *Who Speaks Of Conquest?* was an obvious indication that most readers like an occasionally well-written galactic space story. It has given me some ideas for the future, but in the meantime James White has now completed his first novel-length story and “Tourist Planet” will soon be commencing as a three-part serial in this magazine. There is a two-part serial under construction for early next year and several long novelettes have already been planned and are in embryo stages. The short stories seem to be taking care of themselves.

So I feel that we can commemorate this fiftieth issue by saying that the next year looks like being a better one than any that have preceded it.

John Carnell



EMPATH

During the past few years stories concerning the psi powers, especially those dealing with telepathy and telekinesis, have been extremely popular. In the following story Mr. McIntosh produces a theme which is probably akin to the psi powers in a human being yet so obviously a part of the sub-conscious that those people who may have it would never know—unless something happened to force it into their conscious mind.

By J. T. McIntosh

Illustrated by QUINN

I

From the top of the second highest building in the city a man fell, screaming. As he dropped he fell outwards from the slim, glittering, silver-and-grey building. A few hundred feet down he struck the steel sheath over the duorail, dented it and went right on down. Surprisingly, he was still screaming.

He landed plumb in the middle of a second duorail cover further down and lay still. He wasn't screaming any more. The body moved slowly, not because it was alive, but because it was very precariously balanced on smooth, curved metal. Slowly, gradually, it slipped until with a sudden rush it toppled over the edge. It fell a mere hundred and fifty feet this time. The sidewalk, which had been by no means deserted a few seconds before, was clear for hundreds of yards around as the corpse hit the asphalt.

The asphalt was tough and stayed the same shape. The body didn't.

On the roof of the building a girl who coughed and retched and held one hand across her ribs as if to hold herself together came to the parapet and stared down. A pretty girl this, tall, blonde, intelligent looking. Her eyes were quick and watchful, and even dishevelled and winded as she was she appeared very capable of looking after herself. She looked down only long enough to establish that the man who had fallen hadn't miraculously stuck on some projection only a few feet down and thus managed to be still alive. Having seen that this wasn't so, she turned and hurried to the door that led off the roof, still holding her hand against her body.

The door was locked.

For a moment she paused, suddenly desperate. Then she understood. The other door, of course, the one on the other side of the roof, would be open. She took a few steps in the direction of the other door, intent only on getting clear before the police arrived.

She stopped. Her hand went to her neck. The white beads which she had worn there lay scattered like hailstones all over the roof. She glanced down at her feet. She wore only one shoe. The other would almost certainly be on the roof somewhere. She looked at the wire-covered skylight against which she had fallen. The wire guard had clawed half a dozen tiny strands from her dress. And there might be other things she didn't even know about, other things to identify her.

It wasn't going to do her any good to run.

It wasn't going to do her any good, either, to deny that she'd pushed Robert Green off the roof. She knew somehow, knew with complete certainty, that the other two would have covered their tracks so completely that if she even mentioned them she'd be putting herself out on a limb. The police would prove that there had never been two other men.

If she was going to be stuck with the killing of Robert Green, as she so obviously was, she had to have a self-defence plea ready. There was only one story to tell, one story that might be believed.

Her hair was dishevelled, her clothes disordered but not torn. She fixed that with two sharp tugs. The material was thin and ripped easily.

Someone began to pound on the door she'd tried and found locked. She looked about her quickly, and the sharp stone edge of the parapet caught her eye. She tore her dress still more, turned and placed her bare back against the stone edge. With her foot against the skylight housing she pressed herself back, the stone cutting into the flesh across her shoulder-blades. She twisted from side to side to make a good job of it.

Then she stood up, caught her dress about her as well as she could and went to the other door.

It gave her an unpleasant shock to find that the second door was locked on her side. She should have thought of that possibility. She twisted the key, and two policemen burst through.

The first cop cast one quick glance round the roof. "Okay, Dent, you take over here," he said. His hand clamped round the girl's arm. "Name?" he barked.

"Betty Lincoln. I was—"

Without another word he dragged her down the stairway, past the others who were trying to climb up the narrow stairs to the roof. Already, mere seconds after Green had hit the sidewalk, the place was alive with cops.

Betty started to say something. "Shut up," said the cop briefly. She learned he was Lieutenant Verne when another officer who was on his way up to the roof spoke to him. Three more cops joined Verne and Betty. Apparently it needed four husky men to handle her.

They closed in round her and hustled her to the nearest elevator.

"Lieutenant Verne!" she protested. "At least let me put something else on before you take me—"

"No," said Verne flatly.

"But my apartment is right here, and you can come in and see I don't—"

"No," said Verne, and pushed her into the elevator cage.

Neither Verne nor anyone else said anything on the trip down. Betty wondered if she ought to make protests of innocence, outrage, apprehension, or just protest. Something odd about the whole affair stopped her.

Obviously there was a lot more to this than she had suspected. Very much more. Already she had seen more than twenty policemen. It had been just on nine when Green fell to his death. It was hardly five after now. To be on the scene so quickly Verne and his cohorts must have *known* Green was going to be murdered. So maybe she was in the clear.

And maybe she was in deeper than she suspected.

Who rated a score of cops and maybe more coming, anyway? Why had she been arrested without a question, without being allowed to say a word? Why hadn't they let her go into her room? And wasn't it usual to get an on-the-spot statement from a suspect, for about fifty good reasons?

Perhaps they knew enough to believe the truth. Perhaps she should forget all about her attempted rape story and tell it the other way.

Verne's way of going about things had given her time to think, time she hadn't expected to be granted.

No, it still had to be a self-defence plea. Nobody could ever prove Green hadn't assaulted her. The other way, they'd demolish her story, ridicule it, and then there would be nothing between her and the gas chamber.

Justice was supposed to be the same for everybody, but it wasn't wise for angels to count on that. Though Justice was blind, the people who administered it were not.

Hundreds of people packed the foyer, hoping to catch a glimpse of an arrest. Verne picked up a dozen more cops near the elevator, and they packed round Betty so closely that few people in the foyer could even have seen that she was a woman. They swept her outside and into a police-car waiting opposite the door.

Less than ten minutes later, at police headquarters, Betty found herself in the presence of a youngish but very sharp-eyed police captain whom Verne addressed as Wayman. Three of the cops went out. Verne sat down behind her.

"Go ahead," said Wayman, "tell your story."

Something about Wayman, his manner, his choice of words told Betty that he wasn't an ordinary homicide bureau officer investigating an ordinary murder. Again she hesitated between the two stories she might tell. Instinct told her to tell the truth. Reason insisted once again that the truth wasn't going to do her any good. She followed reason.

"I never saw the man before," she said rapidly. She didn't see a recorder, but she knew there must be one. There must be no faltering, it must all come out as if it was a vivid memory. "I met him outside my room on one five two—"

"This is Green you're talking about?"

"Yes."

"How do you know his name?"

"He told me."

"Just why would he do that?"

"I don't know. I met him on one five two anyway—"

"Top floor?"

"That's right. I was just coming out. He persuaded me to go up on the roof with him."

"Now how did he manage to do that?" asked Wayman with sceptical interest.

Betty shrugged. "Look, he's dead now, isn't he? We're not concerned with his morals or mine, are we? He was obviously a

mole and didn't look in the least dangerous and whatever his proposition was, I wanted to hear it. I was pretty sure I was going to turn it down, but—"

"Yeah," said Wayman, again sceptically. "You were pretty sure you were going to turn it down. But you went on the roof with him just the same."

Betty ignored that. Angels got used to ignoring things like that. It was easier to ignore them than fight everybody who said them.

Besides, she understood and could cope with Wayman's technique. He didn't necessarily disbelieve what she said, he was just needling her to make her speak before she thought, say things she'd meant to keep back.

"He hadn't been there before," she went on. "He didn't even know how to get on the roof. It isn't used, that roof. No gardens or anything. There's gardens on the Waterfall Building, because it's the highest, but this one is just a flat roof and the doors up to it used to be kept locked. There was a fire department inspection a while back and they made the trustees leave the doors—"

"Yes, yes," said Wayman. "Get on with it."

She told the rest of her story, careful not to draw attention to the things that corroborated it, yet explaining in passing the door locked on the outside and the one locked on the inside, the beads, the lost shoe, the strands of fabric on the skylight, and all the other things Wayman didn't even know about yet. She frankly admitted that she had put Green over the parapet but made it sixty per cent accident, forty per cent defence of her honour.

Wayman didn't say anything at this point. She was glad when a police doctor and two women officers arrived to examine her. Her bruises were evidence for her defence. She wanted to get them on the record.

They took her away. Before she was examined she was photographed from every possible angle. The photographer found the weal on her back and took two close shots of it.

Like Verne, the doctor and the two policewomen said nothing. It was a very thorough examination. The way everyone was working on this case Robert Green might have been the President.

Following the examination the photographer was called in again to take a picture of the other bruise. It was in her solar plexus. Then the women officers produced some pins and helped Betty to effect temporary repairs.

After that they took her back to Wayman. He looked up from what were probably the first reports from the roof. Verne was still there.

"Well?" Wayman said, looking at the doctor.

"What do you want to know?" the doctor asked. "I don't know a thing about the case. I might tell you everything you don't want to know and miss out the important things."

"Was she in a fight?" Wayman demanded.

"Yes. Her arms were held—of course, that may have been after arrest. She suffered a blow in the solar plexus probably severe enough to cause unconsciousness. A bruise at the back of the head and minor abrasions on the body suggest she fell back against a wire frame of some kind and lay there for some time. She was pressed back against the edge of a stone wall, apparently struggling hard at the time. She—"

"She's quite strong enough to handle a man of forty-eight, her own height, very thin, in poor health?"

"Quite. Could throw him about, I guess."

"She did," said Wayman drily.

"On the other hand," said the doctor, "she's undernourished, ten to fifteen pounds underweight, and has eaten very little today. She might feel faint after an effort, might find herself in trouble. Another thing. She's *virgo intacta*."

"Oh?" said Wayman. "All right, doctor. Write your report. We may want it soon."

The doctor went out.

"That's one for the book," Wayman murmured.

It was obvious what he meant. Betty pretended, however, not to know.

"So you went on the roof with him. You wanted to hear his proposition," said Wayman. "Yet apparently you're not the sort of girl to—"

"I meant to turn it down," Betty retorted. "I fought him. And I'm a virgin. Doesn't that add up?"

"Yes," said Wayman. "Some people might think it made sense. But then, we know the whole thing's a lie. We don't think, we *know*."

II

Betty knew calm certainty when she heard it. They did know it was a lie. So she'd been wrong. She should have told the story the other way. It was too late now. She had made a mistake, or there had been something she didn't know, something she couldn't know.

"That's how it happened," she insisted. "I can't help it if you—"

"We know Robert Green," said Wayman. "He didn't come up to one five two voluntarily, he didn't proposition you, he didn't assault you, and if he had you could have tied him up with one hand."

He paused, and then gave her the first piece of information that began to explain the furore over Green's death. "Besides, he had been sending out alarm signals for six minutes before he was murdered."

"You mean—personal radio?"

Wayman shrugged. He wasn't going to answer that. "Now let's have the real story."

Betty looked at Verne, just not to look at Wayman. Verne had said nothing since they entered the building, and he seemed to have no intention of saying anything now.

"All right," she said, knowing she was beaten. She had tried something which should have worked, and it hadn't, because of things she didn't know at the time. The best thing now was to save as much as possible from the wreckage.

"Can I tell this story my own way?" she asked.

Wayman nodded. "I don't know any other way you could tell it," he observed drily.

"Well, I'm an angel, you know that. I make seventeen credits a week. It costs me fourteen just to live. And I like to be independent—if you can believe that. I—"

The door opened and a man came in. Verne jumped up. Wayman didn't move, but looked respectful. This was nobody less than a commissioner.

"Tim's coming over," he said briefly.

"To see her?" Wayman asked, nodding at Betty.

The commissioner nodded. "Don't tell her anything."

"I won't," said Wayman. The commissioner disappeared as quickly as he had arrived. He hadn't looked at Betty. She hadn't seen his face either.

"You were saying you liked to be independent," said Wayman, as if there had been no interruption.

"I've been in a lot of tough spots," said Betty, "and I've got out of them all—so far. Now this thing—I'll tell you the truth, but you're not going to believe it. I knew that when I found myself alone on the roof with Robert Green over the edge. So I faked this. It gave me a chance, I thought. The truth didn't give me any."

"Let's have the truth," said Wayman, "and we'll see."

"I was in my room just before nine o'clock. There was a knock at the door. I wasn't dressed. I called 'Who is it?' Someone said 'Special Delivery.' That wasn't likely, I wasn't expecting anything, and I should have been more careful. I put something on and went to the door. A man came in and shut the door. As he shut it he took out a gun."

"Describe him and the gun."

"He was tall, about four inches taller than me, very pale-faced, with thin cheeks, a sort of transparent nose. You know, a big nose but thin, with the veins showing. He didn't look tough but he was. And he hated me. I don't know why—I never saw him before. The gun was a little silver automatic with a kind of snout. Metal curving away under the hole like a chin. I only saw it when it was pointing straight at me."

Wayman nodded noncommittally.

"He made me get dressed. He said 'I don't care what you wear—you've got ten seconds.' I didn't argue. Then he put his gun in his pocket and took me up on the roof. There was nobody about, of course."

"Why 'of course'?"

"If there had been," said Betty wearily, "I'd have been telling you this in the first place. We went up the stairway, me first. Just as I opened the door at the top, the man behind me pulled off one of my shoes. I guess you know what he did with it. I don't."

Wayman's face betrayed nothing.

"I didn't see him lock that door. There were two men already on the roof, over at the edge. One I never properly saw. The other—"

"How come you never saw this man?"

"It was like the commissioner just now," said Betty patiently. "He came in, he was here, he spoke, he went out. I wouldn't know him if I saw him in the street."

Wayman grunted.

"Once I was on the roof, the man who had brought me up got rough. He grabbed me by the arms and marched me across to the other two. He hurt me more than he needed to."

"That's the thing I don't understand. He hated me, and he didn't try to hide it. He loathed me. He acted as if I was something less than human. He looked at me the way you look down at a snake when you've got your heel on it. I can't tell you how he hated me. Every time he touched me he hurt me all he could. I knew what he most wanted to do was beat me to death. I thought he must have mistaken me for somebody else but—"

"Get on with it," said Wayman, obviously not interested in this.

"This man wrenched me round so I was looking at Green—"

"How did you know he was Green?" Wayman snapped.

"The man holding me told me. He said 'This is Robert Green.'"

"Why would he say that?" Wayman murmured.

"I don't know. Maybe so I couldn't pretend I didn't know who he was."

Wayman grunted again. Betty knew he was getting the impression she was a little too ready with her answers, but it might be even more dangerous to act dumb.

"Green was frightened. I didn't get a chance to look at him, though, for the man with me tore my beads off and scattered them over the roof, mussed my hair, and hit me in the stomach. He meant me to go down and stay down, and I did. I was out for a while, and when I came to there was nobody on the roof but me."

"How did you know these two men hadn't jumped too?"

"I wasn't completely out. I had a vague memory of running steps, a door shutting."

Wayman hesitated a moment. "Why didn't you tell us this in the first place?"

"I told you. I got an idea about those two men. Partly it was the way they worked. They knew their job. They wanted Green out of the way, and they set me up for it. You won't find any trace of them. I knew you wouldn't. So I didn't think it was going to help me if I told the truth."

"Who tore your clothes and pushed you against the wall?" Wayman asked.

"I did. To make it look better."

There was a long pause. Then Wayman shook his head. "You'd have done better to stick with the first story. Someone would have believed it."

"That's what I thought," said Betty levelly.

"Now let's have the third story, what really happened this time."

"I've told you the truth."

"You were right about the second story. It stinks. Are you going back to the first one now?"

Betty said nothing.

"You might as well open up," said Wayman. "We'll find your contact, how much you were to be paid, how you got Green to go up on that roof . . . People think we're dumb, but we find out things like that."

"Then maybe you can find those two men," said Betty. "*They* got Green on the roof. Maybe someone saw them. Look, I don't know what all this is about, but obviously Green was important, obviously there are people who want him dead. You know that—what's crazy about what I told you?"

"That they should involve you," said Wayman.

"I told you, they hated me. They didn't want to get rid of Green any more than they wanted to get rid of me. I could *feel* it."

Wayman shook his head. "The characters who wanted Green dead wouldn't do any crazy thing like letting an innocent party have a good look at two of their agents. They . . ."

Suddenly he realized he was talking too much, and stopped.

"What are we waiting for now?" Betty asked.

"We're waiting," said Wayman.

Five minutes passed. Then a man came in, a man of about thirty who didn't look like a cop. His soft felt hat wasn't like the soft felt hat of detectives. He looked more like a musician than a policeman.

"Glad to see you, Tim," said Wayman. "This is the girl."

Tim turned to look at Betty. His gaze was nothing like what she expected—nothing like anything she expected. Instead of being hard and penetrating—this was apparently a man who mattered—it was just quietly friendly. Even shyly friendly. She thought for a moment she had seen him before somewhere, then decided she hadn't. She'd have remembered him.

"Let her go," Tim said.

Wayman jumped. "Say, Tim, she lied at first and then told some fantastic story about two men holding her up and . . ."

"Let her go," Tim repeated.

Wayman pulled himself together. Betty could almost see his mind working. *Tim wants her to go so we can pull in her associates. He doesn't want me to tell her any more. We'll get this straightened out when she's gone.*

But Betty didn't believe that was what Tim meant. She thought that somehow this Tim knew she was telling the truth.

She got up quickly. "When someone says I can walk out of police headquarters," she said, "I don't waste any time arguing. Even if I've only got one shoe. Thank you one and all." She made for the door.

Tim was there first, to hold it open for her. That had been done for her about three times in her life.

At the same time he was doing another, very different thing. He was holding out a folded bill to her. "Buy yourself some new clothes," he said.

For a fraction of a second she thought of refusing it. But you didn't refuse anything unless there were strings attached to it—and she could see there were no strings attached to this.

"Thank you," she said and took it.

It was twenty-three credits more than a week's wages.

"You'll get your shoe in the next room," said Wayman surprisingly. "Tell them I said you could take it."



"Thank you," said Betty again, and went.

The door closed behind her.

"Have her tailed," said Tim.

"Of course. She did it?"

"No. I don't know what her story is, but it's true."

Wayman half rose in his chair. "Then why did she—"

"I've no idea what she did, and less idea why she did it. But she's as pure as the driven snow. Purer, when you consider she's an angel. Wayman, know what this means?"

"No. Does it mean anything?"

"The Circle must have thought when they killed Bob that he was our last empath. Otherwise they wouldn't have bothered trying to involve that girl. The fact that she's released will tell them there's another. *You'd* never have let her go. Cops never do. When a suspect's handed to them on a plate with all the evidence they need, no cop who's worth his salt ever cares whether he's really guilty or not."

Wayman moved uncomfortably. "Cut it out, Tim," he said. "Look, if what you say is true, shouldn't we hold that girl?"

"Won't do any good."

"But we can try her—and see she's freed. Juries do things like that. Then the Circle won't know there's still an empath working for us."

Tim shook his head rather wearily. "Today, tomorrow or the next day I'll do some job or other and the Circle will know there's still an empath up against them. If I'm used at all, the Circle's bound to know I exist."

He looked thoughtfully at Wayman. "You're down to your last chance," he said, "and you've got no idea what a spot you'll be in if you lose me."

"Nonsense," said Wayman. "Of course we know—"

"You know damn all," said Tim with a sudden flash of anger. "All you know, all you've ever known, is that with empaths on both sides it's stalemate. Five hundred swords plus one machine-gun equals five hundred swords, or any other number of swords, plus one machine-gun. But suppose you were left with nothing but swords to fight machine-guns?"

"We know your importance to us, Tim," said Wayman soothingly.

"You do like hell. But I'm wasting my breath. You never *will* know it unless it happens—unless you find yourselves facing a machine-gun with nothing but swords."

He frowned. "I wonder why no others are coming through? Should be some—not many, but two or three. The Circle can't be getting them all, surely?"

He smiled a twisted, speculative smile.

"What's the laugh?" Wayman demanded.

"I wonder if Bob and I were wrong," Tim said. "Poor Bob, if he was he suffered for it. But I'm not weeping any tears over Bob until I'm sure I'm not going to follow him. I wonder if we were wrong, joining with the forces of law and order instead of doing the natural thing and joining the Circle?"

III

Betty retrieved her shoe and set out to walk home.

There was no traffic in the streets. There had been only one solution to the parking problem in cities, and at last the cities had found it—no cars, no parking problems. The only vehicles in cities now were police cars, ambulances, cleansing department trucks and the like. Private citizens had to use the duorail or the subway, leaving their cars, if they had cars, garaged on the outskirts of the city. As a matter of fact, most of the people who owned cars lived well underground anyway, and the subway was more convenient for them.

Betty had managed to make herself look reasonably respectable, and no one gave her a second glance. It was getting dark now, and everyone else she saw was in a hurry.

Cities had stopped growing upwards for no very clear reason, started again for no very clear reason, and finally stopped for a very clear reason indeed. The reason was what had happened to Buenos Aires.

With the growth of Brazil, Buenos Aires had become a very big, very new, very tall city. It claimed the greatest skyline in the world.

After the bomb not one stump taller than a hundred feet remained. Not many people did either.

There had never been an atomic war. There had nearly been one in South America, and another in Southern Europe. Seven atom bombs were exploded. That was more than enough for everybody.

This affected the rest of the world not politically but socially. Once upon a time the elite had lived in the west end of a town, the riffraff in the east end. Sometimes the division had been just the right or wrong side of the tracks.

After Buenos Aires the division became up and down. It wasn't that anyone expected to be atom-bombed. It was just that the people who could moved down and down, began to build their homes underground, in fact, and the people who had no choice lived in the clouds. It was a dichotomy of money rather than rank . . . but money *was* rank. The rich were the moles—the name had been applied derisively at first, but like so many names applied in that way it had stuck, it had been accepted. The poor were the angels. The people who lived in the clouds because they had no choice, because it was cheap. The first—perhaps the only—people to die if an atom bomb *should* happen to be dropped.

There were a lot of poor. Not so many decades ago, all had been well for the people of America, the people of England, the people of a few other favoured countries. The world produced hardly enough

to keep its human population alive but that didn't matter to the people who had plenty.

Oranges were destroyed in California and fish in East Anglia. And in India and China and a few other places, those who didn't die of starvation suffered from malnutrition all their lives.

India and China couldn't have done much about this situation. It was the wealthy, benevolent countries who helped them to equality . . . and then found that fair shares for all meant very little for anybody.

The ingenuity of men was equal to the situation, of course. The ingenuity of *some* men. The smart men, as usual, got what they wanted. Which meant that the standard of living went down and down and down—for those who weren't smart men. Instead of hungry millions in India and China there were hungry thousands in London, Berlin, Rome, Paris, Sydney, New York.

Of whom Betty Lincoln was one. She was pretty, intelligent, cultured, but she didn't happen to be smart. The ways which might have been open to her to better herself she didn't like.

She made seventeen credits a week and needed fourteen just for food and other essentials. She had two pairs of shoes, one coat, and nineteen credits in the bank. Being cultured, she knew that there had been a time when a girl like her, a girl in her position, her job, would have had twenty summer dresses. But being intelligent too, she knew that those days were gone and didn't let it bother her.

As she walked she thought not of the curious and dangerous events of the evening so far, but of what she would do with the twenty credits. A new dress was essential. She could get a good enough cotton dress for a credit sixty. Prices had dropped with wages. Economically, it was the Good Old Days over again. Now it was discovered that nobody wanted them, after all. There were no more wistful stories about what a credit used to buy. Now there were incredible tales of stenographers earning sixty a week in New York (but they must have been important executives, surely, not just ordinary stenographers).

Betty was deliberately not thinking about Robert Green or Lieutenant Verne or Wayman or Tim. There would be time for that later. She went straight up to her room. There was no sign of the police any more.

With her key in the lock she hesitated, reluctant to go in. She frowned, shrugged, and opened the door.

"Close it behind you," said a voice.

Betty's head jerked up. It was the same man as before, the tall, pale man who had come to her room and taken her up onto the roof,

the man who hated her. He stood across the room watching her, and she could feel his hate beating at her in waves, like heat surging from a furnace.

The same gun was in his hand, pointing at her middle.

She closed the door. There didn't seem to be much choice. The man didn't speak again. The gun was still pointed at her middle and she saw his hand move.

"Wait!" she said desperately. "I learned something at police headquarters. They told me . . . I met . . ."

She collapsed on the floor in a faint.

It was a desperate risk to take. The man had been on the point of shooting. He wasn't like the killers of the screen who spend half an hour explaining the whole thing to their victim and allow the rescue forces to arrive. He was there for one purpose to kill her, and he was going to do nothing else.

But if she hadn't managed to interest him by what she'd said, there was no way out anyway. And without pretending to faint she could see no way of getting near him or getting him to come near her.

She waited, forcing herself to relax completely. Presently she felt herself being turned over, face upwards. She lay completely slack.

Then without opening her eyes she shot up with all the strength in her body. She was lucky. Her head hit him on the nose and for a second he was helpless with pain. With ferocity fanned by the knowledge that all the chances were against her being alive in twenty seconds' time, Betty threw him over and flung herself down on his ribs, turning so that the hardest part of her, the hip-bone, made contact. That gave her time enough to smash his head against the floor. And after she had done that once, she had all the time in the world to smash it again and again until he was certainly out, possibly dead.

She rose, sore, shaken but triumphant. She picked up the gun and felt better. Even now, however, she was well aware that though she had overcome this man once she wouldn't manage to do so again, and that even the possession of the gun and the unconsciousness of the killer didn't make her safe from him. She didn't dare phone yet. She hardly dared to put the gun out of her hands, but had to. She found some string and bound his hands, over and over again. To make sure she drew a belt tightly about his feet. Then, having picked up the gun and locked the door, she felt safe.

There was probably at least one confederate of this man in the building. He would hardly batter the door down, however.

She phoned police headquarters and asked for Wayman. Hewasn't available. She asked for Verne. His curt voice came on the line.

"This is Betty Lincoln," she said. "I've got one of the two men who killed Robert Greene, here at my apartment."

There was a moment of stunned silence. "Got him—How?" Verne demanded.

"Unconscious or maybe dead," she said. "He was trying to kill me."

"But I've had a man tailing you. He'll be outside in the passage now."

"Lot of good he's doing there," Betty remarked.

"I'll be right over," said Verne. And he was. The assassin hadn't recovered consciousness when Verne arrived, though by this time Betty had established that he was alive and probably not too seriously hurt.

Verne stared for twenty seconds at the man on the floor. "How did you do it?" he demanded.

Betty told him.

"I guess it's possible," he admitted. He shook his head nevertheless. "Well, look, Miss Lincoln," he said, comparatively respectful now, "you'll have to come back to headquarters and make a statement. And another thing. If everything you've told us is true—and I'm making no comment about that—you're going to need protection from now on. The people who got Robert Green are out to get you too."

"But why?" Betty asked.

It didn't surprise her that she got no answer.

She asked the same question at police headquarters. Wayman was there again, only his attitude was different now. He was almost friendly. Verne was present. Tim wasn't.

"I haven't any idea why, and that's the truth," Wayman said. "I've no idea why you should be important to . . . these people."

"What people?" Betty demanded.

"I can't tell you that."

"If I'm in danger of my life from them," Betty said, "you might at least tell me who they are."

Wayman shook his head. He scribbled something on a piece of paper. "Protection isn't much good against these birds," he said. "There's a better way. Go and stay there tonight."

Betty took the paper. It was the address of a mole hotel, an underground hotel. "I can't afford to stay there," she said.

"You won't have to pay. You'll be there at public expense. A few days' accommodation costs less than a murder investigation."

Betty shuddered involuntarily.

"That's a hideout we use sometimes," Wayman went on. "When you leave it, forget it. If you ever tell anybody about it, we'll find out and you'll be in trouble."

They took a very full and complete statement from her, this time with the significant difference that they appeared to believe what she said. After that they were in a hurry to be rid of her and get on with their investigations.

Betty made only one protest. "I need some things from my apartment."

"You can't have them," said Wayman.

"It would only take a few minutes. If I can't go myself, someone could collect them for me."

"No," said Wayman, not mincing matters. "It isn't safe. The less there is to connect your apartment with this place you're going to, the safer you'll be. Verne, take her away and make sure she's in the clear."

Verne took her away. And soon Betty saw what Wayman had meant. They didn't go out at the main door of police headquarters. They didn't go out of police headquarters at all. When they emerged into the street it was some distance away. Then, acting as if this precaution had accomplished nothing, Verne led her hither and yon until she was dizzy, and quite certain that all pursuit must have been left behind.

Verne must have been satisfied too, for he took her to the address Wayman had given her. He didn't go in with her. Presumably Wayman had phoned the hotel.

It was a small private hotel a couple of levels down. Betty went inside and looked round her with some trepidation. It wasn't easy to intimidate Betty, but she had never been in a place like this before. Everything was clean and neat and shiny.

The girl at the reception desk knew about Betty, apparently, and wasn't impressed by her. "You clean?" she asked doubtfully.

Betty thought she meant was she armed. When she realized the girl meant it literally, she reddened. "As clean as you," she retorted. "At least."

"Okay, okay," said the girl. "We get all sorts here, you know. Will you blow your top if I suggest you take a bath?"

"No," said Betty, recovering her composure. "I want a bath anyway."

The girl nodded. "Then I guess you're all right," she said. "Some of the people you-know-who sends us never use water—internally or externally."

"Oh, I drink it sometimes," said Betty, "when I can't get milk."

The girl looked at her sharply, but Betty's gaze was guileless.

Betty's room wasn't much bigger than her own tiny angel apartment, but much more luxurious. The bed was so soft she kept coming back to feel it again. The bathroom had mirrors heated to prevent condensation. The furniture was if anything too comfortable. Once seated she found it very difficult to get up again.

While she was in her bath Betty had leisure for the first time since nine o'clock to think.

And she realised she was in love with Tim.

IV

Of course it was fantastic. But she wasn't fool enough to tell herself it couldn't be true. She knew it was true. She was in love with a man she'd seen for about two minutes and hadn't had time to think about since.

She had to see Tim. She understood now why she'd thought she knew him. He looked like a younger, stronger, nicer Robert Green. He must be Robert Green's brother. That didn't matter, however, except that it partly explained Tim's importance. He was important for the same reason that Robert Green had been important.

Why Betty had to see Tim Green she didn't know. It wasn't just because she was in love with him. But there was no argument about it, she had to see him, and immediately. She didn't argue. She accepted the fact, just as she'd accepted the knowledge that she loved him.

Betty stepped out of her bath and looked at herself in the mirror which formed one wall of the bathroom (you could cover it with a plastic curtain if you were too modest to watch yourself bathing). Should what she saw reassure or depress her?

She didn't take time to reach a conclusion. Towelling herself briskly, she went back to thinking about Tim. And she didn't think of Tim as a man she'd been with for two minutes. She thought of him frankly as a man she loved. Obviously she couldn't expect him to be in love with her, not at the moment. Something would have to be done about that. She had no intention of loving from afar. All her life she had been waiting to meet Tim, waiting to fall in love with him.

The first thing was to find him. She guessed he'd be well concealed, well guarded, yet that problem didn't worry her at all. She passed to something else.

Tim had been well dressed—not only expensively but also tastefully dressed. Even to go looking for him she'd have to hire some clothes.

She couldn't even walk about in this district dressed as she was without inviting comment. She looked like what she was—a pretty angel.

Mole hotels, even this one, were so discreetly run that it was a simple matter to slip out without being seen. It was easy enough to find a costumier still open, with clothes for hire. In fact, when she went in the woman there knew what she wanted.

Every evening thousands of angels, men and women, descended to the mole levels, and most of them had to hire clothes as a first step. Some of them were on frankly meretricious missions. Some of them had girl-friends or boy-friends of a higher social station than their own and were pretending that there was no gulf. Some of them were just angels who enjoyed pretending to be moles for a night.

Betty emerged dressed like a queen in a midnight-blue gown and silver slippers. She went straight to the nearest subway depot and boarded a west-bound train. She didn't have far to go, but it was just too far to walk.

Betty had an inquiring mind. Nevertheless, just as it hadn't occurred to her to wonder about her reason for having to see Tim Green, she didn't wonder how she knew where he lived. She wasn't incurious. She knew quite definitely that wondering wasn't going to do her any good at all.

She reached the house and stopped, dismayed.

The mole levels were anamalous. On the other hand they were underground, basement dwellings which could never be fine, open, spacious and beautiful. On the other hand they were the houses of rich people who wanted them to look as grand and showy as possible.

The avenues—of course they were called avenues, when they weren't boulevards—were just twenty-four feet wide. The houses were exactly twenty-four feet tall, and massively faced, for their reinforced walls supported the city above. The ceiling over the avenues, twenty-four feet across, twenty-four feet up, radiated bright but soft lights. Within these limitations the houses which enclosed the rabbit-burrow avenues were as impressive as they might be. This meant forests of marble pillars, huge stone-carved doorways, tall discreetly-curtained windows, and statues in alcoves every few yards.

Artistically the effect was execrable.

The house Betty had come to was like all the others, a twenty-four feet high frontage with a doorway which could have admitted a dragon, carved stonework, long thin windows full of purple curtains, ornamental friezes wherever they could reasonably be placed and one or two places where they couldn't.

But what was different about this house was that a dozen men were lounging about near it. Though not one of them was in uniform, even someone a lot stupider than Betty would have realized that the loungers waiting about weren't concentrated round this house for nothing.

Tim Green was well protected against the people who had snuffed out his brother's life.

It was clear that Betty wasn't going to get to him unless she confided in his guard.

She was just about to walk up to the house, anyway, and see what happened, when she became aware of something important. Tim Green was no longer in the house. She was almost certain he'd been there a few minutes before, and now she was almost certain that he wasn't. The question was, where was he?

There were limits to what Betty knew. It was wonderful, true, that she had known where Tim lived and had been able to go right there though no one had told her and though she had never been in the district before. Now, however, she was at a dead end. She knew Tim Green was still somewhere around, but not where.

Betty walked slowly back the way she had come. She was forced now to examine her awareness, to try to think things out instead of just accepting them.

Tim Green, and almost certainly Robert Green too, before he died, had some strange gift. Betty thought at once of telepathy, but that wasn't quite right. The word would do, however, until she knew better.

Tim had looked at her and *known* she hadn't murdered Robert Green. He hadn't had to ask questions, hadn't needed to touch her. If he hadn't looked into her mind he had done something very like it.

Now, did Tim know she'd come looking for him? Had he in some way told her to seek him out? Had he told her then or later where he lived, how to get there, and made sure she came?

Had he told her to be in love with him?

Betty didn't know, and she could sense that whenever she tried to analyze, the thing she was trying to analyze squirmed from under the glare of mental light she turned on it.

The more she tried to pinpoint Tim's present position, the less she knew about it.

Perhaps distances played a part. She turned back, walked a little way and stopped, trying to work the thing out in her mind *without* analyzing.

Almost at once she knew again that Tim Green was very near. She still didn't know exactly where.

Well, if mental analysis destroyed this strange knowledge, perhaps mental relaxation would help it. Walking along slowly, keeping well clear of the men surrounding the house where Tim had been, she tried to let herself *feel* without analyzing or criticising what she felt.

Gradually she became aware that Tim was below the avenue. As soon as this ludicrous conclusion formed she disbelieved it and it dissolved.

Analyse, criticize, or disbelieve, she told herself, and this sense, whatever it is, can't work. You have to . . . just let yourself know.

She still found it hard to believe that Tim could be below the avenue. There was another level below this one. There were no stairways connecting the various levels, only elevators running in vacuum shafts. Air pressure was kept separate on all levels.

She managed, however, to still her critical faculty. When she succeeded she became aware that Tim was moving at right angles to the avenue, away from the house which was being so carefully guarded.

"What do you want?" a voice asked behind her. It was sharp but polite, intended to frighten if she was guilty, but not offend if she was innocent.

Betty turned. One of the guards was looking her up and down suspiciously. He must be wearing rubbers.

"I don't want you," she retorted.

"If you're just walking," he said, "just walk somewhere else."

"Some other time I'd argue," she told him. "But as it happens I'm going anyway."

"Keep going," he advised.

Betty walked slowly away from Tim Green's house.

Tim himself was by this time in the next avenue. Still walking slowly away, still conscious of the eyes of the plainclothes man on her back, Betty became aware that he had turned at right angles. She ducked through the first archway into the next avenue.

Half a minute later she was outside a house, a much smaller house, and knew Tim Green was inside it. Inside it, not below it. This time there was no guard outside. She walked straight up to the front door and rang the bell.

V

Tim Green opened the door. He stared at her for several seconds, unable to place her. When he did he didn't seem particularly pleased. He didn't speak. He simply took her arm and pulled her inside.

"Were you followed here?" he asked abruptly.

"No."

"Can you be quite sure?"

She thought back. "Someone may have picked me up around your house," she said. "The other house."

"How much do you know?" he demanded.

"Not very much. Just that you're a . . . a telepath or something. You touched my mind tonight, and maybe you left behind more than you meant to. Anyway, I had to come and see you."

She had considered telling him bluntly that she was in love with him, to see what he did about it. Now in his presence she found it was impossible. That sort of thing was all very well in theory, but not very adult when you considered putting it into practice.

It was still true, more than ever true. He was less friendly than he had been in Wayman's office, more excited, more jumpy. It didn't matter. She hadn't fallen in love with the Tim of one moment, a still photograph.

"We've got to get out of here," he said jerkily.

"But you just came here."

"So did you. And that altered the situation. I'm just trying to make up my mind whether I'm glad you came or sorry. Come on, let's get back to the other house."

Once more Betty sensed that there was something going on which she didn't understand. She hesitated, reluctant to move until she had some idea what she was letting herself in for this time.

"You know you're an empath?" Tim asked.

"A what?"

"Then you don't. But it's obvious. You've just proved it. Nobody but another empath could possibly have found me here. I didn't think even an empath could do it. And the more I think about it, the more I wish you hadn't."

"Why?" Betty asked.

"Let's get out of here first," Tim said. He paused as if listening.

"This ability of yours isn't clairvoyance, I suppose?" Betty inquired.

"No. And it's not just mine. You've got it too."

"Have I? I thought—"

"Don't argue." He led her into the kitchen. He did something, she didn't see what, and the refrigerator swung aside. There was a hole behind it.

Tim was on his knees, about to crawl into the hole. "Must we go that way?" Betty asked.

"It's the only way."

Betty shrugged, hitched her long skirt up about her hips and took off her stockings. She was piqued when Tim showed not the lightest interest in these proceedings.



They crawled into the hole. Within a yard or two they reached a shaft leading downwards. Tim touched something, and simultaneously the tunnel closed behind them and a light came on.

It took them only about five minutes to travel between the houses. Betty found the tunnel quite as fantastic as any of the other events of the day. A private underground tunnel between two houses savoured more of the Middle Ages than the world she knew.

Tim relaxed slightly when they were in the other house, the guarded house. He even showed some interest now in Betty's legs, which was something. Perversely, she wasted no time in putting on her stockings and pulling down her dress.

"Now tell me all about it," she said.

He led the way from the kitchen in which they had emerged to a warm, comfortable lounge. "Drink?" he asked.

"I don't use it."

"I do." He poured himself a stiff one. "There's something I have to do first." He paused for a moment as if making up his mind. Then he picked up the phone.

"Get me Wayman," he said. "I know he's at home. I wouldn't call him if it wasn't important. Get Wayman."

During the pause that followed he killed his drink. "Wayman? Come right over, will you? I've found another empath—that girl, Betty Lincoln. Of course she's all right. Thing is, I guess this means we have to go ahead with that plan . . . now, before the Circle is ready for us. Hell, you don't think *I'm* bursting with enthusiasm, do you? But I guess it's got to be done . . . Okay, we'll be waiting for you."

He put down the phone, poured himself another drink, and turned to Betty.

"All right," he said. "This thing you and I have—"

"How do you know I have it?" Betty asked.

"How did you find me?" he countered. "Listen. It isn't telepathy. No one can pick words or ideas out of another person's brain—yet. It's a sensitivity to atmosphere. To aura. To feelings. Mostly, the atmosphere created by a lot of people, close to you. Sometimes just the attitude of one person. Look, there were about a hundred reasons why I shouldn't have opened the door to you a few minutes ago. Yet I did. Why?"

Betty didn't know why.

"Because I knew you weren't dangerous. I didn't know who was outside the door, but I knew it was safe to open it."

Betty frowned. "Yes, but you've been jumpy ever since."

"That's something else. You'll hear about that when Wayman gets here. Forget that just now. I tell you, you can't pick information out of the air. You can't tell what's going to happen, or what people are thinking. You can only feel things—and guess.

"About one person in half a million has this gift. Seems a lot, doesn't it? Only most of us go psychotic early. Generally paranoid, sometimes schizophrenic. We sense we're different, we can't take what goes on round us, what we know but nobody believes but ourselves. Never mind that now. What you can do is this. You meet someone, and you know whether he's for you or against you or just doesn't care. You know when there's going to be trouble. You know when you're safe. You know when you're among people who think quite differently from you."

He filled his glass again. Betty didn't speak, concentrating on the effort to make sense of his quick, jerky, disjointed sentences.

"You personally," he said, "have taken half of this for granted and disbelieved the other half. Otherwise you'd know all about this, you'd be crazy, or you'd have lost the gift. You'll find you don't have to learn anything except how to sit back and receive, and after you've got it sort everything out."

"Why didn't I use this until I met you?" Betty asked. "Did you activate it somehow?"

Tim nodded. "Could be. That happens sometimes. You sense a touch . . . no, not that. There isn't really a touch at all. You sense empathy itself, try to use it yourself and find you can. It's instantaneous."

"But what's the good of it anyway?" Betty said. "Why are you so important? Why was your brother killed? Why did those men who tried to frame me hate me so much?"

"So they hated you?" said Tim with sudden interest. "How did you know?"

"They didn't try to hide it. I felt it, I . . ." She stopped abruptly.

Tim nodded. "You felt it. They were members of the Circle, of course."

"What's the Circle?"

"In a moment. You asked why empaths are so important . . . In the country of the blind the one-eyed man may or may not be king, but he's certainly a very important character. When you can do something that nobody else can do, even if you can only do it inefficiently, even if you can hardly do it at all, you're still way ahead of everybody else. Suppose you could guess right not fifty times out of a hundred on an even chance, but fifty-two. You'd make your fortune in a week."

He filled his glass again. "Well, this isn't anything like that. You can't guess better than anyone else, except about people. Look, you haven't been very successful in life but surely you've found you've very seldom been wrong about people?"

Betty nodded.

"Well, that's why," said Tim. "What it amounts to is that we empaths are a different kind of people, even if we don't learn this until comparatively late in life. What do people do when they discover they're different, in some way superior to ordinary people? They try to take over the ordinary people. That's what the Circle tried to do."

"What's the Circle?" Betty asked for the second time.

"Empaths like us. International, like us. Only we're working with the ordinary people who aren't empaths and the Circle are working for themselves. I don't know who's right. Maybe the Circle is. Maybe I'm being a traitor to my own race, siding myself with the last one—like some Cromagnon making a pact with Neanderthal man against his own people."

"They killed your brother."

"That's right. But I've been responsible for killing some of them, too . . . Anyway, you've got no choice, Betty. The Circle declared war on you. They must have found out you had empath tendencies, how I don't know. They must have been sure, too, that you wouldn't join them—that you'd be on the side of law and order, against them. A traitor, as far as they were concerned, A traitor like me. And they're right. You'll be drafted, partly to keep you out of mischief, partly so that you can be studied, partly so that you can be used."

"I'm beginning to understand," said Betty. "Empaths developed . . . how long ago?"

"About five years."

"And some of them became the Circle—the new rulers of Earth. The others, like you and Bob, backed the old order. So it became a battle between empaths, with new ones like me in the middle."

Tim nodded. "That's it in a nutshell."

"How exactly does the government use empaths?"

Tim shrugged. "We can tell the level of a man's loyalty just by meeting him. We can walk around a factory and sense that there's going to be a strike. If there's a leak anywhere we can feel the leak, simply because a leak means disloyalty somewhere and we can feel disloyalty. We know whether a man's got a weak spot. It shows up when we meet him, for at some level he knows about it and it throbs with his effort to hide it. We know when a man's lying—we even know when he's going to lie, before he speaks. We know—"

"How do we know?" Betty demanded.

Tim shrugged his shoulders. "That's the gift. You know now, for example, that you can trust me, and that all this is true."

Betty nodded slowly.

"You'll have to learn some things," Tim said. "But the only important thing is this—to learn what you can do, and *believe* you can do it. You don't have to learn it from me. Wayman could tell you what to do, though he doesn't have to. Oh—speak of the devil."

Wayman came in.

"Hello, Wayman," said Tim. The bourbon he'd been drinking was beginning to have its effect. He was flushed and artificially cheerful. "Meet Betty Lincoln, empath. Be properly respectful."

"You're quite sure?" Wayman asked.

Tim turned to Betty. "See what I mean about the blind?" he said. "They never believe anyone can see. Prove it time and again, they're never satisfied."

Wayman flushed. Betty got a hint of the friction there must always be between people who could do a thing and people who couldn't. Wayman was evidently detailed to protect and work with the empaths, but there was friction even with him. Tim's manner didn't help.

Tim turned back to Wayman more soberly. "We've got to go ahead with that plan," he said.

"What plan?"

"What Bob and I were going to do. Only I'll have to take Bob's place, and Betty will take mine."

Wayman looked startled. "Can she do it?"

"She found me," said Tim simply.

Wayman hesitated. "I don't know that I've got the authority to let you go ahead with this, Tim," he said. "Bluntly, it's more than an even chance that we'll lose you."

"But you'll have Betty," Tim pointed out.

"We've only got your word for it that she's—"

Tim threw up his hands in frustration and turned again to Betty. "See what it's like?" he demanded. "Even when they *know* you're an empath, they won't believe a word you say."

"All right," said Wayman. "I'll believe you. But all the same—"

"You say you don't know that you've got the authority to let me go ahead with this," he said. "I'm damn sure you haven't got the authority to stop me."

He got up. "You'll be able to do everything from here," he said. "Au revoir—I hope."

"Aren't you going to explain to the girl?" Wayman asked.

"You can do that. I want to get started before I let myself be convinced I shouldn't do this."

He turned to Betty and to her amazement caught her in his arms and kissed her tenderly. "I know you love me," he said. "You must. We'll see about that when I come back . . . if I come back."

And with that he was gone.

VI

Wayman spent twenty minutes on the phone. The fact that one of his brief calls was to the President would have convinced Betty, if she'd still be in in any doubt, of the importance of the empaths.

She was grateful for the opportunity to get her thoughts in order, to integrate what Tim had told her and what she could now guess.

People with the abilities Tim had mentioned could be a mighty force for good or evil, at that. It was understandable that many of the first empaths who had discovered their own powers had allied themselves against ordinary non-empaths—secretly. They could do that, finding each other as she had found Tim.

It was also understandable that the more responsible men and women who found themselves empaths had allied themselves with the accredited governments of the world, realizing that this new talent would have to be integrated with all the other talents of humanity.

And the circle had been right about her.

The world hadn't been kind to Betty Lincoln, angel. But that didn't mean she felt justified in using her new power to get her own back on a society which had done little or nothing for her.

It wasn't sane to declare war on the society you'd been brought up in. To try to change it, yes—that made sense. However, Betty found herself, without argument, on Tim's side, on society's side, on the side of the multitude who weren't empaths.

Perhaps the Circle—after all, they were empaths too—had been able to sense that. That was why they'd hated her. She was the traitor, not they. She was the empath who would betray empaths if she got the chance. So they'd tried to fix things so that she didn't get the chance.

Wayman was through at last. He turned to Betty, frowned at her, visibly wondered what to say to her.

"Tim's crazy," he said at last.

Betty shook her head. "I don't think so. I don't know what he's doing, but he isn't crazy."

"What was that about you being in love with him?"

"None of your business," said Betty. "What's going on?"

Wayman collected his thoughts. "The Circle have about three empaths," he said. "There are others with them—hired men, malcontents, spies maybe . . . we don't know. What matters is the three empaths."

"Two," said Betty. "I handed one over tonight."

"Three," said Wayman. "I'm not counting him. Before Bob Green died, Tim and Bob had worked out a plan. A very simple but very dangerous plan—dangerous for Bob."

He stopped again, trying to work out what to say. Betty could understand his difficulty. He was a non-empath, explaining empathy to an empath.

"Empaths can sense one another," Wayman said, "but only if . . . some emotion is involved. We could take Tim all round the

city in an armoured car and he couldn't detect the Circle empathys any more than he could detect gold. Not unless they were careless. Understand?"

Betty understood. That was why Tim had said *I know you love me—you must*. Because unless she loved him she couldn't have found him. Even with all the empathy in the world.

"The only way Tim can find the Circle," Wayman went on, "is to place himself alone, in the open, in actual danger. Then let the Circle know he's alone, in the open, unguarded. Then let them hunt him."

Betty stared at him, the colour draining from her face. So that was what Tim was doing.

"It was supposed to be Bob," said Wayman. "But he's dead. It's desperate anyway. It's got to be real danger, of course, or nothing happens. If we had Tim tailed, the tension wouldn't build up. He wouldn't know why, but he wouldn't get anything. The situation wouldn't jell. If Tim was guarded any other way, same thing."

He went on talking, but Betty, though she tried to force herself to listen, couldn't take in what he was saying. She was aware only of Tim, walking out alone to give the Circle a chance to kill him, as they'd killed his brother.

She knew now why he'd shown no concern over Bob. As soon as he met her he'd known what he had to do. That was why he'd said he didn't know if he was glad or sorry she'd come. He hadn't felt Bob's death much because you don't grieve over someone else if you're not sure you're going to last the day out yourself.

"What do I have to do?" she asked abruptly.

Wayman jerked in his chair. "I've just been telling you," he said.

"Tell me again."

"Open yourself up to Tim. If you do love him it's easier. Think about him. Don't let yourself imagine what *may* be happening to him, that'll lead you off on the wrong track. Just think about Tim. You'll know where he is and how he's feeling. I'll get a map . . ."

He got up and went out quickly. Betty was interested to see that he was prepared to leave her alone. Was it possible he really trusted her? No . . . she had barely asked herself the question when two cops came in and stood quietly by the door.

"Make yourselves at home," she said.

They paid no attention whatever.

The place must be alive with guards, apart from those in the street.

Wayman was back. He spread out a map of the city, with insets of the various mole levels. "Look at that," he said. "Get familiar

with it, so that when you think of a place you'll be able to put your finger at the right spot on the map straight away."

"I don't know much about the mole levels," said Betty.

Wayman looked worried. "Did Tim know that?"

"I guess not."

"Well, look at the map anyway."

Betty looked at it. Unused to her newly-awakened gift, it didn't even occur to her to try to place Tim on the map. That made it easy. "He's there," she said, pointing excitedly, before she'd even realized what she was doing.

Wayman nodded.

"Aren't you going to alert the police bureau in that section?" Betty asked.

"No."

"Why not?"

"I told you, he's got to be in danger. Real danger. Look, Miss Lincoln—Betty—now this is started, we've got to play it Tim's way. He must be in some danger already or you wouldn't be able to pick him up—"

"Either that," Betty murmured, "or else I love him very much."

Wayman was taken aback. "Oh . . . that. Yes." He looked at Betty speculatively, trying to read her. But Wayman was no empath. Betty knew enough already to be quite sure of that.

"Anyway," Wayman went on, "the danger's got to get worse. If I alert the police in that section, Tim will be that much safer and he'll feel it and get nothing. In fact, you'd better give me back that map. You're Tim's safety-line, but we don't want you to be too good. If you know where he is all the time, that might be enough to stop him getting a thing."

Betty tried to relax. At this moment, of all moments; she became aware that one of the cops at the door was finding it hard not to look at her and harder still when he did. She was making a big hit with that cop. It was only then that she remembered how provocatively she was dressed.

That was a pleasant, relaxing thought. Presumably now she'd be well looked after by a society which needed empaths. Money, clothes, jewels, all the food she could eat . . .

VII

Suddenly she was in a street. It was night. She was with Tim, in a city street, but she might have been in a dark forest hunted by wolves. It was the same feeling. Oppressive, terrifying, silent. The sort of silence which is more than a mere absence of noise—the sort

of silence which has plenty of sound but not the sounds one wants to hear, the sounds one is listening for, desperately . . .

It wasn't a picture, really. She imagined the city street just as she imagined the forest and the wolves. Both were equally real, or equally false.

The feeling was utterly real.

Death was stalking her—or Tim, it didn't matter. Not closely enough for the source of the danger to be identified, just closely enough to be sensed. Death had an appointment with her. Death would keep it. Would she?

She tried to think of Tim as the victim, not herself, but it didn't work that way. Empathy . . . *a deep, sympathetic understanding.*

The most shocking thing about it was that this was only the beginning. The wolves were in the forest, but not near. Not close enough.

Betty realized now why Tim had been so jumpy. It took courage enough to walk unarmed through a dark forest haunted by wolf-packs. How much courage did it take to decide the wolves were too far away, and go and look for them?

"Snap out of it," said Wayman abruptly, and Betty was back in a warm, comfortable, safe room, with a six feet two cop staring down at her and shifting his large feet uncomfortably.

"Don't do that," said Betty sharply. "I may be new at this, but I've got to do it my way. You don't know any other way I can do it—remember? Stay out of this. When I want you I'll let you know."

She thought with passing amusement as she relaxed again that it was no wonder the Circle considered themselves something special. She'd seen Tim treat Wayman as a sort of office-boy. Already she'd started to do it herself. They'd have to watch that, or they'd be qualifying for Circle membership.

It took a while before she could make contact again. Effort made it impossible. You had to wait patiently and let it happen. It was like going to sleep when you were too excited to sleep. The more you tried, the further sleep receded.

Prompting the feeling by imagining what it would be like was bad too. Betty thought of the dark forest, and nothing at all happened.

When at last she did manage to relax and get something, it was brief, hazy and patchy, but it did explain why contact had become so difficult.

Tim wasn't in danger any more. Something had cut the tension. For some reason he was safe for the moment—so there was nothing for Betty to sense.

"No danger," she said. "He must have wandered out of a trouble spot. Or the Circle aren't interested in him just now. I don't know."

"But he *was* in danger?" Wayman asked.

"Yes, just a moment ago. I wonder—"

Suddenly she was in a jungle—a hot, steaming plague spot. She knew that the pictures her mind supplied were allegories, if anything. Her mind supplied images, examples simply because it worked that way.

But this jungle was a pest spot, and that at least was real. Tim was in real trouble.

Betty guessed the jungle image had come because here the threat could come from many things and very quickly . . . a snake underfoot, a tiger in the thicket, a panther slinking silently through the long grasses. She tried to brush away the imagery and get at the truth, but all that happened was that she lost everything for a moment, and when it came back the imagery was different.

Now it was an open, empty plain. She was the only thing on it, erect, unguarded, naked in a vast emptiness. The essence of the image was a sense of being exposed, visible for miles, quite unable to hide.

Behind her something moved. She turned. Nothing. She saw something out of the corner of her eye, and spun round. Again nothing.

And then something began to move toward her, something plainly visible, something that didn't hide itself but hid its shape.

Betty panicked. Not because she feared the thing that was advancing, but because she didn't know what to do about it. She didn't know where Tim was. She didn't know what the menace was, or where it was, or what to do about it.

She snapped back to the warm, safe room in Tim's house.

"That map, quick!" she exclaimed. Wayman thrust it at her.

She tried to relax again, tried to make contact with Tim. She couldn't do it. Was he dead? Was there nothing to make contact with?

Gradually she forced herself to be patient, to be calm. She settled back in her chair, deliberately relaxing all her muscles.

Without any conscious effort on her part the muscles she was trying to relax tightened and she was tense in every nerve.

The thing approaching Tim was very close. And he was terrified. Betty realized that why every muscle in her body was taut almost to agony wasn't because she was afraid for Tim, or afraid for herself. Tim's fear was part of her, so much a part of her that her own body expressed it.

Desperately she thought once again *What can I do?* They hadn't told her about this. When she talked to Wayman, when she withdrew her-

self from Tim, she knew no more than Wayman did. When she tried to locate Tim she lost contact. How could she help when she could stay in contact with Tim only while she did nothing?

Abruptly she found part of the answer.

It wasn't up to her to do everything. She couldn't see through Tim's eyes, know exactly where he was, assess and identify the danger. She had to leave all that to Tim. Her job was to preserve a certain balance.

Out in the city somewhere a man was being hunted. The situation was as old as life itself, and perhaps the sense Tim and Betty were using, supposed to be new, was actually as old as life too.

The new thing was that Betty and Tim were using it consciously, deliberately, to find a known enemy.

It wasn't a battle of minds. Humanity hadn't got that far yet. It was a conflict of emotions, almost tangible emotions, feelings which could be passed from one mind to another.

Betty snapped back once again.

"He's near, but not near enough," she said quickly. "Yet already he's in terrible danger. We've got to lessen it—leave him in danger, but not such a spot as he's in now."

She stabbed at the map. She hardly looked at it. "Send men there" she said. "I've got to get back . . ."

The ease with which she resumed contact this time was a grim indication of Tim's peril.

A pattern was beginning to emerge. The situation was so clear, in fact, that Betty no longer got hazy images of forests, jungles or barren plains—she got something more like a diagram on a sheet of plain paper.

There were three Circle men—no, four. Three points, but one was a double force. Two men there. No, a man and a woman. Betty could even tell that.

And there was hate. She could feel the hate, the way she'd felt it from the man who had forced her to go up on the roof. She knew now that she'd been using empathy even then, before she'd met Tim.

They hated Tim because he was working for the little people, the unimportant people who weren't empaths. They hated him because he stood in their way, the only important obstacle in their path. They couldn't do anything until they got rid of Tim.

Which they now meant to do, at any cost.

Slowly Betty felt the tension lessen a little and knew that her order to Wayman had done that. Tim would feel it too. Would the Circle? Very likely. And they might guess, if they hadn't guessed already,

that though Tim was dangling temptingly in front of them, there was a hook in his mouth.

Betty fought the impulse to direct Wayman's men further, to make Tim so safe that the circle would withdraw their interest and the whole operation would have to be cancelled.

If she did that, Tim would have to go through all this again. It was kinder to Tim to let him go on with it now—even if all her impulses were to save Tim, and leave the Circle alone.

The three points which represented the Circle empaths were moving about, going round Tim. They were jockeying for position . . .

And they achieved what they wanted. Though they were no nearer Tim, though there was no sign that anything significant had happened suddenly their hate and Tim's danger were so strong that Betty almost cried out.

She wasn't on the battlefield. She didn't know what manoeuvre had just been made, what advantage had been gained. She knew only that Tim was down for a count of eight and it might be ten.

And there was nothing she could do! She grabbed blindly for the map, knowing as she did so that anything she might suggest would be too late. She even had a flash of what was actually happening.

Tim was on the first mole level, just below the surface. A drunken party were marching raggedly home, talking and singing. It was a friendly, happy, harmless group and had nothing directly to do with the Circle or Tim or the battle which was going on.

But one of the Circle empaths had managed to tip off one of his men . . .

The roisterers were jostling Tim in a good-humoured, playful way, mussing his hair, pushing him, offering him a drink but not letting him escape.

They didn't know, though Tim, Betty and the Circle did, that among the group was a man who wasn't drunk, a man who had a knife, a gun and a silk scarf, and was on the point of using whichever was most convenient as soon as the opportunity occurred, knowing his companions were all too befuddled to retain any clear idea of what had happened.

Betty was pointing at a spot on the map, knowing that it could only be a matter of seconds before the assassin got his chance. And as she did so, though she wasn't in direct contact with Tim, she felt the bubble burst.

The danger was over. It had been a count of eight. Tim was up and fighting back.

In the urgency of the situation a few seconds before, rapport with Tim had been so close that she knew exactly what was happening.

But safety was less dynamic than danger. She had no idea what Tim had done. Probably he had identified the would-be assassin in time. But how had he dealt with him, unarmed?

It didn't matter. Betty went back to Wayman.

"You know where he is now," she said. "Look, things happen too fast for me to be able to tell you what to do. Besides, you know what can be done and I don't. Next time, if I just tell you it's time, will you take just what action you can?"

Wayman nodded. Betty noticed he now had a small police radio in front of him, the telephone being too slow. She hadn't seen anyone come in, she had been too occupied at Tim's end.

It was very difficult to make contact again, which meant that Tim was in little or no danger. She cast around for so long that she began to be afraid the Circle had withdrawn completely.

She came back to Wayman. "Your men are too close," she said. "Pull them back."

A few minutes later there was a flaming instant of tension, gone almost as soon as it came. Whatever that was, Tim had dealt with it. Shortly afterwards another period of stress lasted longer, but wasn't as dangerous.

It looked as if the Circle were throwing in their ordinary non-empaths agents and Tim was having little trouble in dealing with them.

For a moment Betty knew exactly where one of the Circle members was. She told Wayman. The question was, how did you capture an empath? She didn't wait to see. She was back with Tim at once.

VIII

Tim was running, apparently. Yet there was no serious danger. Betty couldn't understand. She understood a few moments later when there was a sudden sharp wrench, rather like an electric shock, and she was flung back to her own environment. She blinked at Wayman uncomprehendingly.

"Got one," said Wayman with satisfaction. "You're doing all right, Betty."

"You mean—you killed him?" Betty asked.

"What did you think we were going to do—ask him to join the police force?"

"What happened?"

"Tim's been trying to split one of them off, I guess. He drew off three of them and left the other so far behind he gave up. Then Tim went under cover—took a trip by subway, I guess, where he was quite safe and the Circle lost him. He managed to spot number one for you, you told us, and we got him."

"Shoot first and ask questions afterwards?" asked Betty.

"With the Circle," said Wayman grimly, "we shoot first and don't ask any questions at all. Now I wonder if the others will give up?"

Betty couldn't make contact for quite a while. When she did, Tim and the three remaining Circle empaths were so close that she almost stopped breathing.

Yet the tension was dying down. She could feel it dropping, dropping. Tim had been in real trouble, but whatever it was, he'd dealt with it. Everything was going blank, as if the volume control on a radio were being gradually turned down.

She reported to Wayman.

He got up. "We've got to go there," he said. "The Circle's trying to get Tim without using empathy. They're all blanking out. Tim has to, too. They know about you by this time, of course. Let's go."

Betty stood up. "But where?" she asked.

"You tell us," said Wayman.

She shook her head. "I can't. They've all blanked out, just as you said."

"Mean you can't find four empaths, all within a square mile?"

Betty tried again, shook her head.

Wayman was looking desperate. This was exactly what he wanted, all the Circle empaths in such a small space that he could throw a cordon round it and arrest every human being inside it. But he didn't know where. Tim and the Circle had been moving around so much the previous fix was no use.

"Wait," said Betty. "Maybe I can find Tim again, the way I found him tonight."

"Last night," said Wayman, glancing at his watch.

Betty was amazed to find it was seven a.m. She realized she was desperately tired.

The cop who had been impressed by her was putting a man's coat round her shoulders—one of Tim's no doubt.

"Thank you," Betty said, with a smile. The cop reddened. She saw she had found another friend. Tim and the susceptible cop. Not Wayman. He would never be anyone's friend. He was a policeman.

They went out into the avenue. "Not down here," said Betty suddenly. "Up in the open."

"Where?" one of the cops asked. Wayman waved him silent. Wayman knew how empaths worked. Betty couldn't get anything direct. To find Tim, she would have to clear her mind of questions and let it work in a vacuum.

They went up to ground level and ten policemen and Betty piled into two cars. It was already light, the pale cold light of early morning.

"I don't know," said Betty uncertainly. "You see, there's absolutely nothing going on . . ."

"With Tim and three Circle empathths almost touching each other, there must be something going on," said Wayman. "They're not holding hands."

"Holding hands," Betty repeated thoughtfully. "I got something when you said that. Holding hands in a park . . . what's the nearest park?"

"City Bounds."

Betty shook her head. "No. What other parks are there?"

"Green Park?"

"Try that." She frowned as the cars started off. "I wish I knew more about empathy."

To her surprise Wayman laughed. "You know more than Tim," he said.

"What do you mean?"

"There's degrees in empathy, like everything else. Tim's better than any of the Circle's empathths, otherwise they'd have got him long ago. You're better than Tim. You get things quicker and you get more. This, now. Nobody else but you could find an empathy who didn't want to be found."

"I don't know that I can either," said Betty. "Anyway, this is wrong. Try Herbison Gardens."

The cars changed direction.

"That's where he is" said Betty excitedly. "Somewhere in the park. Hidden, I guess. I don't know about the others, though. They may have gone."

As they reached the park it was becoming quite clear to her how important the battle she and Tim were fighting was.

Without empathths hemming them in, blocking their path, there was no limit to what the Circle might do. This struggle showed that. It was like a fight between two men over an anthill. To ordinary people, any empathy was practically invulnerable. He could sense trouble before it became trouble.

She hadn't had time to work out what empathths could do. But Tim had, and he was risking his life to destroy the Circle . . .

"They're here," she said. "All of them. In the park."

That was all Wayman wanted to know. He gave crisp orders. Within a few minutes the park was surrounded. "Still here?" he asked Betty. "They haven't got away?"

She nodded. "I can be quite sure now. The three of them are radiating now, of course. Tim isn't—he isn't in any danger."

Wayman turned to two of his men, including the susceptible cop. "Take Miss Lincoln outside and wait," he said.

Betty started to protest, but saw it wasn't going to do any good. She went with the two policemen back to the cars.

She was just about to step inside when the electric shock came again—much worse this time. She went rigid and fell beside the car, half under it.

Another empath had died.

The two cops lifted her into the car, watching over her anxiously.

"I'm all right," she said, lay back and closed her eyes.

That shock was going to come twice more . . . perhaps three times. Tim was still there.

She could guess what was happening in the park. The two remaining Circle members—they were the man and woman who had been together all along, perhaps brother and sister, or husband and wife—were the hunted now, not Tim. She felt their danger as earlier she had felt Tim's. And even now, with a police cordon round the park, with Wayman and his men looking for them with orders to shoot to kill, their danger was less than Tim's had been a few hours earlier.

They were moving about, trying to lessen their danger. Empaths merely had to turn round to know that this way was safer than that, that walking was safer than running, that hiding was a good chance. If there was the ghost of a chance of escape, the two Circle empaths would escape . . .

Betty sat up sharply, grabbed the handle of the door. The two cops, startled, pushed her back gently but firmly.

"You don't understand," Betty said breathlessly. "I should have known . . . Tim was being chased when he came in here. He found the only safe place. Now the other two are being chased. They've found it too—the only safe place. And Tim's still there?"

She struggled with them. Unsure whether to keep her where she was or take her to Wayman, and reluctant to handle her roughly, they let her get out of the car. Immediately she dashed into the park, with the two cops close behind her.

Betty knew exactly where to go.

The keen identification that came with real danger had brought her a flash of the true situation, like the one she'd had when Tim had been surrounded by revellers with a cold, sober assassin among them.

Tim had had his back to the wall when he came into the park. He couldn't go any further. He'd had to hide. He'd been hiding ever since, and the Circle had known it, which was why they'd been so determined to stay in the park they'd allowed themselves to be trapped there.

Now, trapped, they were in much the same position as Tim had been. And like him, they found the same answer.

Betty flew across the park, under trees, across a stream, her dress trailing behind her. Far off Wayman saw her and hurried toward her with a dozen men. The two cops with her could have stopped her, but kept just behind her.

She reached the pool. None of the cops had been there. None would have been there, but for Betty, until it was too late.

There were two small lakes separated by a sort of dam with a promenade along the top. In the middle of the nearer lake, making for the promenade, were two swimmers.

"Shoot them!" Betty exclaimed. "Or they'll get Tim. They're armed, he's not."

"But there's no sign—" one of the cops said blankly.

Betty tried to seize his gun. He held her off, looking at his colleague, wondering what to do.

Betty looked round desperately. It would be a couple of minutes before Wayman arrived. The two cops with her were reluctant to do anything in the absence of orders. And the heads of the two swimmers, one dark and short-haired, one blonde and flowing, were very close to the dam.

Betty turned, dropped off her heavy coat, and dived into the pool.

It was futile, but it was the only thing she could do. The two swimmers heard the splash and turned their heads. But they must have known before that that pursuit was close. All they could hope to do now was get Tim before Wayman got them.

The woman half turned as if to swim toward Betty.

His mind made up for him, the susceptible cop fired. He may have meant to fire a warning shot. If so, his aim was out. The woman reared clear to the waist out of the water and slid back. When she came to the surface again she floated head down.

Meantime the man had dived and disappeared. Betty wasn't half-way to the dam. She carried on doggedly.

Suddenly a movement made her look up. Tim was on the promenade waving her back. She stopped and trod water, startled.

The last remaining Circle member, frustrated in his attempt to get Tim, was coming back. He was obviously a strong swimmer. Betty turned in sudden panic.

For the first time she felt danger which was real, which was immediate, which was danger to herself. It wasn't second-hand fear she experienced this time. She thrashed wildly back the way she had come. The empath's gun would probably be useless in the water, but he

would have a knife too, and only one thought—to kill before he was killed.

He nearly made it. The susceptible cop, his susceptibility a handicap this time, missed twice and the Circle agent caught Betty by the arm. The cop was then scared to shoot in case he hit Betty.

Fortunately Wayman wasn't. He arrived just then and fired one shot. The grip on Betty's arm tightened, then relaxed. The man beside her slipped below the surface.

Tim and Betty were rushed back to the cars. Though Betty was shivering under three borrowed police coats, she was in far better case than Tim, who had been in the water for a long time.

"I found that place because I had to," he told Wayman, his teeth chattering, "and stayed there because I had to. Beneath the promenade there's a place where water can flow between the two lakes. There's two feet of air above the water level. It's a perfect hiding-place because hardly anyone knows it exists, nothing's visible and there's no sign from the promenade of any movement of water between the lakes."

"Then how did you find it?" Wayman asked.

Tim shrugged, trying to grin. "Because I had to, I told you. Of course the Circle threesome couldn't find it. Not until they were in as tough a spot as I'd been. Then they knew, just as I'd done, that they had to swim and dive and stay where they found themselves . . . But Betty, you needn't have worried so much. Naturally when they were coming, I knew."

Betty grasped his hand and pressed it.

"And that's really the end of the Circle?" Wayman said.

"Here, anyway. I think we'll be able to handle anything else that comes along—empaths plus authority ought to be able to beat empaths alone."

He sneezed.

Betty pushed him into one of the cars and followed him in.

"I love you," she said, ignoring Wayman and the other cops.

"I know," Tim said, and sneezed again. "We can hardly help it. If we've got any feeling for each other it bounces back and forth between us and keeps getting bigger. Give me about two weeks and I'll love you too."

Still ignoring Wayman, Betty kissed him again. Tim sneezed.

"A week," he said. "Three days."

Betty put her arms round him and kissed him properly. Tim started to sneeze, realized he didn't need to.

"I love you too," he said. And for a change, he kissed Betty.

J. T. McIntosh

Contact between differing races can never entirely be a one-way affair where the dissemination of knowledge is concerned. Each side will always learn something from the other, but it will depend to a large extent upon the Interpretation of the knowledge exchanged which side will ultimately benefit the most.

THE WARRIORS

By Arthur Sellings

Illustrated by QUINN

Linda came in from the tiny hydroponics room, oozing that kind of bustling efficiency which always irritated me. I went on humming, determined to be cheerful. I knew she was standing there, but I looked studiously out of the port.

"For the love of Mike," she suddenly snapped out, "think of a new tune, will you?"

"But I thought you liked the old tunes," I said in an injured tone.

"Tunes, *plural*," she said tartly.

"But that's *our* tune—remember?"

"Ugh! Stop talking like a woman's magazine."

I sighed. That's what you got for trying to approach women on their own terms. I went on, determinedly, knowing I was in the right. As a concession I stopped humming and continued by whistling through my teeth. I had my back to her, but I *felt* her grimace.

"If you'd only sing, it would be something," she said, "instead of making those dreadful noises."

So I sang it—

*"A room with a view
And you,
With no-one to hurry us,
No-one to worry us,
O - oh —"*

"Oh, oh, oh—" She threw something she was holding onto the floor with a clatter.

I turned with a look of godlike patience on my face. At least, that's the way I intended it. And whether it came out that way or not, I knew it succeeded. It always did.

She snatched up a beaker and threw it at me. I ducked. It hit the port with a dull clank. Her face was furious. For a moment I felt sorry for her. Being in a spaceship, with ports of foot-thick lucite and domestic ware made of plastic, did hamper a woman in venting her feelings. I remembered reading somewhere of an enterprising crockery firm back on Earth who, after two centuries of plastic, had re-introduced china. Their products had sold like hot-cakes. I hadn't understood then. But now I did. I smiled sympathetically.

"Stop smirking," she screamed. That crafty look came into her eyes, and she changed tack. "It's about time you took a look at the garden, isn't it?"

The way she referred to it as the "garden" always made me wince.

"That's your job, isn't it?" I said. "I've got more important things to do."

"Like looking out of the port and mooning into space, I suppose."

I sighed. "Observation is the correct term," I said.

"Well, you won't see anything there that's not in the maps."

"A good scout," I said pompously, "does not rely on maps. Remember the light-warp round Rigel? If I'd trusted to maps I'd never have found the Kova system."

"And a dreary bunch of worlds *they* were."

"Heavens," I said. "We're not on a tourist trip. Those five planets are worth their weight in thanium to Earth."

"I don't think," she said precisely, "that I've ever met a more materialistically-minded man. And all for the Service, what's more. It isn't as if I got one *vigh* coat out of it."

"Hah!" I said. "Now who's being materialistic?"

"You wouldn't understand. There's something more than materialistic about a *vigh* coat. It—" She broke off as if explaining the tortuous nuances of the feminine mind to a mere male was beneath her dignity.



How primitive they really are, I thought. They live for sensation, for baubles, for the caressing touch of a *vigh* coat about them. And we men spend our lives pandering to their whims. I looked at her, striving to recapture the memory of our first meeting, the evenings together when we thought being in each other's company was the only real thing in the whole universe. But the effort failed. There was nothing like being out in space to bring you down to earth.

I didn't smile at the pun. It was too serious a matter to smile at. The little habits that set your teeth on edge. The mannerisms that you once thought delightful but which made you want to scream after living five years with them. With no escape—beyond going into the

hydroponics room or rooting purposelessly in the stores. I'd tried them. They weren't much help. They weren't far enough away.

"What are you staring at?" she said.

"I was only thinking," I said. Then, striving for objectivity, telling myself that the rest was all nerves, I added, "We'll get you a *vigh* coat the minute we get back to Earth."

She looked at me suspiciously. I resented the implications of that look.

"Well, do you want it in writing?"

She laughed hollowly. "By the last reports we got from Earth nine months ago, we'll *never* be able to afford one."

I knew she was right. Earth had starships, hyperspace radio, robots—but it still had inflation. Every light-year we penetrated into the depths of space the cost of living back on Earth, and the cost of a *vigh* coat, went up a point. It was like the old story of Achilles and the tortoise, with some of the same super-real truth about it. A *vigh* coat was the asymptote we would never quite reach. And it had seemed such a good proposition at first.

Two could live as cheaply as one, so the old adage had gone. I had been smarter still. Two could live as cheaply as *none*. You met a girl in the Service, you volunteered for one of the new two-man scouts, and got married. It was as simple as that. You knew you signed for ten years. But could that matter to a couple—I winced—in love? Ten years of being together, finding new strange worlds, ten years of living for free while the balances back home mounted and mounted. I groaned inwardly at the fresh reminder of human folly—*my* folly.

One of the ancients had once said that the golden rule in marriage was never to meet each other before breakfast. Being married, and in space together, is like meeting each other before breakfast—all the time

The first six months had been heaven. I know, because I remember putting words to that effect in a diary I kept in those first innocent days. The diary had gone out of the refuse-port a long time ago—after Linda started using it as a weapon. A mental one, I mean—it was too small to be worth throwing. But not small enough to hide. You can't hide a thing on these flying hen-crates. Least of all your feelings.

That sense of what must have been bliss, but which in memory is little more than a haze, took us beyond our first planet. I can still remember, though, our feeling of awe at being the first humans to land on that world. It was only a poky mudball, its inhabitants a

particularly smelly kind of swamphog, but it was *ours* ; *we* had scouted it. We talked about it sentimentally for weeks after leaving it. Then we just talked about it, because we had precious little else to talk about. You meet so few people in space. When one of us, and I'm sure it wasn't me started comparing the other to one of the inhabitants of that mudball, you could say the honeymoon was well and truly over.

"Well," she said, tapping her foot. "Are you going to see to the garden or not?"

"Not," I said.

"But it's in a terrible state. And you agreed to do it."

"That was a concession," I said. A concession I'd made in the first months when I'd seen that hydroponics weren't her strong suit. I'd also seen that she was better at engine maintenance than I was, but that didn't come into it.

"An *agreement*," she insisted.

"Look," I said. "I don't like rubbing it in, because I'm civilised. But I *am* in command of this ship."

"Just like a man," she said, her lip curling. "Throw regulations at me when you find yourself in the wrong. But there's nothing to stop me making a complaint against you when we get back to Earth."

I smiled smugly. "A wife can't give evidence against her husband. That goes for the Service, too, you know."

She laughed. "*Innocent* ! You mean it can't be *used* against him. Not directly. But Commander Hanson will listen to me." She preened herself. "We women still have our weapons."

"By the time we get back to Earth," I said, "I think yours will be a bit rusty, dear, don't you?"

I could see from the look on her face that I'd really stung her this time. The lines before then had been out of a weary old script that we repeated like robots, I wielding the big stick, she muttering threats of reports. But I felt rather proud of this bit.

She glared at me like a tiger. The flexing and unflexing motions she made with her hands were like a tiger's, too—a tiger unsheathing its claws. Once the prospect would have excited me. Once a good free-for-all would have been one way of letting off steam. And, when we first discovered it, it was often the prelude to moments almost like the old times. But not now. Now, if we fought physically, it only made matters worse. It didn't resolve anything.

Linda evidently recognised the same point. She smouldered down to a dull malevolence.

"All right," she sighed. "If you're not going to see to the garden, I'm not going to see to engine maintenance. And you can't throw regulations at me for that. But don't start moaning if the air goes stale."

"And don't blame me," I hissed, "if the lights go out."

She went back to the hydroponics room. But she turned back to have the last word. "Well, you asked for it—not me."

I let her have the last word. I was civilised, anyway. But I knew as I turned back to my starwatching that she could hear me, so I started singing again: "*A room with a view, and you—*"

An unnecessarily violent hammering rose defiantly from the 'garden.'

For weeks after that the smell mounted. When a particularly noisome draught of it came out of the ventilating system Linda would look up from what she happened to be doing, and sneer at me.

I'd put myself in a bad position. She could still get on with what she was doing, smell or no smell. Her olfactory sense was blunt anyway. I remembered. But when the lights went, as they did pretty often, I just had to see to them. At first, I wouldn't stir. But the sound of her snickering in the darkness was too much. I always came back swearing, knowing that she could have put it right—*really* right—in a quarter of the time. As it was, my rigs never lasted more than a few days. And the whole pantomime had to be repeated.

After six weeks of it I was ready to do something desperate. Only the fact that we came near a system saved the situation. Linda made out that she couldn't care less, but I think she was relieved, too. After all, the smell was getting awful by now. And this current hop of ten months had been our longest between worlds yet.

The sun had only one planet, but it looked a good one as we came in. Only slightly smaller than Earth, it had the same kind of colouring, a similar distribution of sea and land masses. We went in to land in what I considered would be a temperate zone. We had a little flurry before we did land; it wouldn't have been like us if we hadn't. Linda made rapid, and I'm sure meaningless, calculations involving mass, distance and power of sun, and would have had us land on the equator. I just said "Jet fuel," emphatically, and we landed where I wanted.

After a rapid atmosphere check we opened the airlock and went out onto the surface. We both staggered a bit as we trod the rich brown soil. Landing on a world after months in space always had that effect. Linda recovered quicker than I did (she always does) and went strutting round leisurely, for all the world like a mannequin at a dress show. But I didn't mind. I soon got my planet legs, and until I did I was quite content just to savour the feel of a planet again. A planet, moreover, that didn't call for wearing a spacesuit.

Yes, this was a most congenial world. The air seemed to have one delicious quality that the atmosphere check hadn't revealed. It had a bright, tangy smell, like the smell of fresh apples. But I was disappointed when it soon died, and I realised that it was only my reaction

after weeks of living in a flying garbage bucket, the way plain water tastes sweet after you've had something bitter.

But for all that, this was good air, as near Earth's as made no matter. In fact, I thought as I looked around, this was the nearest in every particular to Earth of any planet we'd met yet. We had landed in the middle of a clearing a mile or so across. The trees that surrounded it made me think nostalgically of home. The temperature was just right, the sky the same happy blue. You don't often come across a sky like that. A lump came into my throat.

Linda had come to a halt and I was conscious of her looking at me. "Well," I said gruffly, "this was the right spot to land, wasn't it? Further south and we'd have baked."

She shrugged and turned away.

The local inhabitants lost no time in turning up. They came out of the trees in a group of about twenty. And they were men. The Service calls anything remotely anthropomorphic, men. But these were definitely the genuine article.

They weren't *quite* human, I saw, as they steadily approached us. Their fingers were abnormally long, and their ears were pointed at the tops. Their hair was a uniform red-brown, curled tightly on their scalps. But these were only minor variations. Their really noticeable unhuman factor was one of behaviour, rather than shape. For they approached with a strange absence of fear. They came to within ten yards of us and stopped. They were all naked, except for a loin-cloth each. One of them stepped forward from their ranks. This one wore a green band round his forehead. He came to within a yard of me and bowed low.

He stayed that way until I tapped him on the shoulder. He came upright again and stood there patiently. I felt awkward. I never was good at this first encounter stuff. Finally I stuck my hand out. He took it gratefully in one of his. But it wasn't until I shook it that he cottoned on. He beamed, and shook it in return—and went on shaking. I had to remove my fingers forcibly in the end. This seemed to embarrass him.

There was a silence, I coughed awkwardly.

The sound seemed to reassure him, and he began what was evidently a speech of welcome. The words were spoken slowly, almost reverently, I thought, and had a graceful liquid sound. When I held up my hand he stopped dutifully, but a hurt look came into his eyes. I spread my palms, raising my shoulders in what I hoped he would recognise as a gesture of incomprehension. I heard Linda giggle behind me. I turned on her furiously. "What's so funny? Handle it yourself if you think you can do any better."

"Certainly," she said, stepping forward. She did do it better. I cursed my stupidity in giving her such an easy victory. I might know metals, but she certainly knew creatures. Straight away she started scratching patterns on the ground, making signs with her hands. In no time she was laughing and talking with them.

After half an hour, while I stood by, feeling foolish and trying to look intelligent, she turned back to me.

"They want us to join them at their village. They want to stage a welcome for us."

"Where's their village?"

"Over there. About three miles away."

"Miles?" I said scathingly. I should have known better.

"Yes, miles." With exaggerated gestures, as if I were a native, she indicated the width of the clearing and held up three fingers.

"Well, it's too far," I snapped. "We can't both go out of sight of the ship. You can go if you want to."

"Oh, don't be childish, George. Leave your regulations back on Earth where they belong. That rule was only made in case of hostility. These are the least hostile people you could find anywhere."

"How do you know?" I said darkly. "Ever heard of an act?"

"Of all the suspicious minds," she said crossly. "You've only got to talk with them for five minutes to see they're harmless. The way they approached us was enough. Hostile species don't approach strangers like that. They're too frightened that the strangers are plotting the same kind of thing for them as they're plotting for the strangers. But these people haven't got fear in their make-up. They don't threaten anybody, so they can't conceive of anybody threatening *them*."

"Very neat," I said. "All in half an hour, too."

She brushed aside the sarcasm. "Well, can *you* see anything hostile in them?"

I peered at them, looking from one to another as they stood there as decorously as delegates to a missionary conference.

"All right," I said. "We'll go if you want. But don't say I never give in to you."

As it turned out, our reception at the village was entirely in keeping with the first impression we had gained of its inhabitants. It couldn't have been more peaceable. We were received by their chief in a dignified and courteous manner. He introduced his wife to us, and indicated that the one in the green headband who had led the party to the ship was his son.

We sat down to a feast of vegetables and nuts and fruit. They were evidently natural vegetarians. Once, while we were eating, a rodent scuttled across the floor. I made a gesture to the chief of

catching the animal, then made motions of eating it. For a moment the chief looked puzzled, then, as the idea impinged, he recoiled in horror, shaking his head vehemently. I didn't pursue the point.

They gave us wine. It was thin stuff, but there seemed to be no limit to the supply. The feast continued well beyond nightfall with music and tribal dancing. The music was made on pipes and dulcimer-like instruments, and was pleasant enough. The dancing, which was performed by both men and women, adorned with leaves and flowers, was something like the Hawaiian variety on Earth. The whole performance was soothing in its gentle languor. I found myself nodding.

I was jolted rudely from the arms of sleep by my dear wife digging me in the ribs.

"What the—?" I spluttered.

"Don't be discourteous to our hosts," she said primly.

"Discourteous, my foot. I'm tired." I yawned. "Let's get back to the ship."

"They want us to stay the night here. They've prepared a hut for us."

"You're getting quite matey, aren't you?" I said. But I was too tired to contest it. They were peaceable enough. "All right, where's the hut?"

"We can't go *now*. They haven't stopped dancing yet."

"They soon will when I tell them to."

"What's got into you, you ape?" she hissed.

"So," I said. "You think more of their feelings than you do of your husband's rest, is that it?"

"Pah!" she said, regarding me with a cold eye. "You never could hold your liquor."

"What! That baby's milk? I could go on drinking that till doomsday. Look, I'm just tired. Do you mind?"

"Remember your precious regulations. We're supposed to act courteously to all species that can appreciate it."

"I've shown them courtesy enough. I'm going to stop this—"

Linda burst out laughing as I looked around. In the heat of the argument I hadn't noticed that the music had already stopped. The dancers were poised like statues. Everybody was looking at us. Each face had the same look. It was a look of dismay, regret, curiosity, and an aching desire to see that peace was made.

I felt awkward, being the centre of all those eyes. I got to my feet. "Sleep," I shouted. "I want to sleep. Get me?" Nobody stirred, except that they all seemed to flinch. I saw Linda lean over to the chief and say a few words in his ear. The chief nodded, and then addressed the company. The dancers and musicians retired, and with discreet ceremony we were escorted to bed.

"You see," I said as I rolled onto the low couch they had provided for us. "If you'd had your way we'd have been up all night, kowtowing to a lot of natives."

Linda didn't answer.

I scheduled our stay on the planet to last ten days. Ten of the planet's days, that is. They were longer than Earth's by about an hour. I had hoped that the time would afford a respite from the guerilla warfare that was our daily existence aboard ship. But the chance to stretch our legs was also a chance for our tempers to expand, which opportunity they gleefully took. I made every effort to avoid Linda's company whenever I could. My chief duties were taking ore samples, spectroscopic analyses, collecting botanical specimens. Her department was getting details of the social pattern, some basic structure of the language, particulars of any crafts the inhabitants followed. So our paths didn't have to cross very often.

Which was a good job, because every time they did, somehow, despite all my efforts, we started spitting. I kept telling myself how childish it was, but did that ever stop anybody doing anything? The fact that the natives couldn't help but notice us, that they stood by in a kind of wonderment while we squabbled, meant nothing to me in the heat of an argument. And I'm sure it didn't deter Linda.

But we managed to avoid outright explosion every time—except once.

Linda employed a native, the chief's son with the green headband, as helper. At least, he seemed always to be hanging deferentially at her heels, and she seemed glad of whatever assistance he gave her. A couple of days before we were due to leave, I noticed her as I passed through the main thoroughfare of the village on my way to a digging. The chief's son was with her as usual. They seemed to be chatting away animatedly. I lingered in the shadow of one of the huts nearby, making some play of studying my notebook.

But my pretence was unnecessary for all the notice they took of me. The native started to dance in front of her. Then she made an attempt to copy him, breaking off before long to laugh at her own efforts.

The cheerfulness of her laughter annoyed me. She didn't laugh for me like that. In a sudden burst of indignation I strode out of the shadows towards them. My temper received added fuel when I saw her lay her hand on the native's shoulder. She happened to turn and see me coming. But she turned back to her native before she dropped her hand.

"What now?" she said as I came up to them.

"That's a question I ought to be asking you," I growled from between clenched teeth.

"You'll find my reports in my notebook," she said coolly.

"That's not what I meant," I said.

The look on her face would have convinced anyone but me that she didn't have the slightest clue as to what I meant. I made it plainer.

"What exactly *are* you doing?"

"Doing? Studying the dance patterns of the race, of course. I didn't know you were interested. I thought you regarded that side of our surveys as poppycock."

"I can see you don't," I said tersely. She got my meaning at last.

"Why, George. You're *jealous*. You actually thought Roon and I—" She collapsed in laughter.

It was then that I saw red. I'm not sure exactly what I said or what she said. I do know how it finished up, with her chasing me with a bobbin from one of the native looms. With us grappling like a couple of savages in the dust. Linda bit, scratched, and struggled like a wild thing. I soon realised how sadly out of condition I'd become after years in space. I lasted no longer than she. We parted in mutual exhaustion, red-faced and panting.

It wasn't until I was on my feet and dusting myself down that I noticed the natives who had gathered round. It looked as if the whole village had turned out to watch us. I swore under my breath. I swore more vehemently when they started—*clapping*.

I couldn't help looking bewilderedly at Linda.

She shrugged. "Something they've picked up from what I've told them, I suppose. Contact isn't one-way, you know."

The clapping continued.

"You ought to be more careful what you say," I said angrily. "The Service has come to a sorry state when it starts imitating a travelling circus."

I stamped off before there was any danger of our giving them an encore. They were still clapping.

In the last couple of days before our departure I vaguely noticed that the natives weren't following us around as much as before. I put it down to an understandable caution after our undignified brawl. I wasn't to know that they were in solemn conclave. Linda only told me that afterwards.

They insisted upon giving us a send-off, just as they had given us a ceremonial welcome. And it was really some affair. But it was obvious, as soon as I saw the spread laid out for us, that they'd really been working on this.

And it wasn't only a matter of amplitude. The first strikingly different thing between this and the previous feast came when two servitors entered, bearing dishes of steaming meat. It looked like

the carcasses of the little rodents which were as common here as rabbits on Earth. Remembering the chief's reaction to my query before, I was surprised. But I took it to be due to some obscure cycle, religious probably. This supposition was reinforced when the chief made a long oration over the meat. It was lukewarm by the time we got it. But it tasted good. The natives ate it with something like awe.

The next change was evident when the music started. This time the pipes played savage, discordant tunes. The dulcimers had been replaced by drums that beat away in wild rhythms quite unlike the lazy ones which had seemed the extent of their repertoire before. The dancers, when they came on, were exclusively male. They were painted now, not festooned with flowers. They pranced up and down in crude and violent dances. I thought I detected an extempore quality about it.

Then the main body of dancers spread out to make a ring. Two remained in the centre, poised for a moment while the music mounted. Then they hurled themselves upon each other. It took me some moments to realise what they were doing. It didn't take much knowledge of dance forms to recognise as it got under way, that this was—*a stylised representation of Linda and me fighting!* One of them was even carrying a native bobbin.

I turned to Linda. She was stuffing a handkerchief in her mouth. I looked from her to the chief. His eyes were already upon me, with the look that these people habitually wore—a strained anxiety to please. He indicated the dancers and nodded gravely and enquiringly.

"Tell him we've had enough," I whispered in Linda's ear.

"*Ss-sh*," was all she said.

I was about to start another argument, but to tell the truth, I was beginning to get alarmed. The natives appeared to be still friendly towards us. Indeed, they seemed to have put this show on for our especial benefit. I could see that this definitely wasn't routine. But I was getting hot under the collar at the thought of being the original of that pantomime being enacted in the middle. These people were showing a new side to their natures. I remembered my first forebodings which I had soon come to regard as laughable. Now I wasn't so sure. I thought of our ship three miles away. And that three seemed suddenly to stretch into a hundred.

I ought to have been relieved, therefore, when the dance in the middle came to an abrupt end. I wasn't, because the way it ended filled me with a fresh disquiet. The dancer with the bobbin fetched the other a terrific whack round the ear with it. The recipient promptly subsided. Which wasn't to be wondered at. The blow would have felled a Martian ox.

At this there was great cheering. The "victor" dragged his victim round the improvised arena by his feet. The audience stamped like mad. The chief leaned towards us, looking even more than usually anxious for our approval.

I whispered in Linda's ear again. "Tell the chief we're grateful for the feast. Tell him the floorshow was fine. And let's get out of here." I hated being so dependent on her, and resolved I'd study semantics all the way to the next system. But I swallowed my pride, because I was beginning to have fears that if things went on at this rate, we might not see another system.

Linda shrugged. "Just when things are getting interesting. You're always the same." She gave me a quick glance, and must have seen the look that must have been in my eyes. "All right," she sighed, and stretched over to talk to the chief.

The chief looked the picture of grief. He addressed the audience as if delivering a lamentation. A groan went up at his words. It was, I thought, ominously like the growling of a dog suddenly deprived of a bone. My knees were trembling slightly as I got to my feet.

But we got back to the ship without incident. The disappointed villagers even made an escort for us. I felt annoyed, annoyed that I should have been alarmed, while Linda had been interested, even amused.

The whole village gathered round the ship, singing mournful, dirge-like songs. I was in no mood for lengthy farewells. I bade the chief goodbye curtly. But even that he accepted hungrily. Tears ran down his cheeks. They all prostrated themselves before the ship.

"Better tell them," I said to Linda, "to mind the jets."

"I've already told them, They understand."

"I wish I did," I said, as I closed the lock behind us. She only laughed.

True enough, they retired to a healthy distance. But once there, they resumed their prostrate attitudes. Something of the truth dawned on me as I closed the jet switch.

By the time we came out of first acceleration I'd got hold of it.

"You *knew*!" I said. "All the time."

"What, that they regarded us as gods?" she said airily. "Didn't you?"

"That sort of thing isn't in my line. Metals are more important."

"Maybe," she said. "But I'm sure you've had much more effect on them as a warrior god than you ever could as a metallurgist."

"As a *what*?" I hadn't figured it that far.

"Fifty years from now you'll be a part of their mythology. A sort of Mars. And I'll be Mineria, I suppose. Can you imagine?"

I began to laugh. I went on laughing. I hadn't had such a good laugh in years. The tears ran down my cheeks. The whole idea was preposterous. These simple people had taken us as gods—and they had interpreted our squabbling as the way of the gods. A way to be admired—and emulated. The implications of the thought suddenly stopped me laughing. *We had changed the entire course of a planet's history with our stupid bickering.* I would be Mars, in all truth the bringer of war. I felt a sudden impulse to turn back, to tell them that it was all a mistake.

Linda seemed to read what I was thinking. "They would have gone that way themselves sooner or later." There was a strange consoling note in her voice that made me look at her in surprise. "It's an inevitable step in a race's development."

"But how can you be sure?" I said. "They might have gone on peacefully for ever. They were herbivores when we arrived."

"That makes no difference," she said. "Humans didn't start making war for the purpose of eating each other."

"That's not the same thing," I said.

Her voice was suddenly back to its old tartness. "Are you trying to teach me my subject?"

My own voice rose. "Look here, don't think because you—" I broke off. Linda was — *smiling*. All the anger, all the irritation, drained out of me. I hadn't seen her smile like that for a long, long time.

"We—we've got to be careful," I said neutrally.

"We do have," she murmured. We suddenly seemed to be closer.

"When we get to the point of—"

"What point?" she sighed.

I suddenly began to feel dreamy. But at the same time strangely clear-headed. I saw my wife clearly for the first time in a long while, probably for the first time ever. After all, it had been just as hard for her. Getting used to each other as husband and wife wasn't a simple task at the best of times, without starting under such unnatural conditions as we had. This business on the planet we had just left, the disproportionate effect of our quarrelling, seemed to bring it all into focus. I felt suddenly ashamed of myself, of my bad temper, my pomposity, my male smugness.

"Did you say something?" she murmured. Her nose was nuzzling my ear. It sent tremors down my spine.

"All I'm saying," I managed to say, "is that you never know what might happen—" My words tailed off.

"How right you are," she crooned.

Arthur Selling.

MARS—

Early in September our most intriguing planetary neighbour Mars makes its nearest approach to Earth in over 50 years. This month's article deals with some interesting details about the Red Planet including the latest opinions on the much-discussed "canali."

FACT AND FICTION

By Kenneth Johns

On the evening of September 7th, 1956 go out and look at the sky—and the stars beyond. By 11 o'clock you will be able to see Mars as a bright red point low down in the sky in the south-east. Take a good look. It is probably the nearest anyone of the human race will be to Mars for another fifteen years.

On this evening of September 7th, the planet Mars makes its closest approach to the planet Earth, a mere 35,160,000 miles will then separate us. The Red Planet, long the symbol of War: but now a new symbol, the sign of man's expansion that is to come.

Mars came within 39,800,000 miles of Earth in 1954 and Venus occasionally approaches as near as 24,568,000 miles. Why should the forthcoming opposition be so important?

With the emphasis on artificial satellites and space travel *soon*, astronomers are looking at the planets more critically. There is an increased interest in their observations. They have new instruments which, they hope, will clear up once and for all the Martian mysteries

—the problem of the canals, the peculiar surface markings and their seasonal changes, and the composition of the atmosphere.

Mars does have a definite atmosphere. It extends to fifty miles above the surface and can be clearly seen in ultra-violet light, which it blocks. And Mars comes close to us only every fifteen and seventeen years. So it will be a long and exasperating wait until 1971 before we have another good chance to examine the planet. Only when Mars is close do we see the whole of its surface facing us lit by the sun.

One gadget that is being tried is the Lumicon, a television camera, amplifier and picture-tube that will amplify faint light 50,000 times. Used in conjunction with a telescope and cine-camera it enables clear photographs to be taken in a hundredth of a second—or less—an advance well on the way to alleviating the wavering images caused by refraction in the Earth's atmosphere. Already it has given the best-ever pictures of Mars at Lowell Observatory. Certainly the 100-inch telescope, equipped with automatic camera using fine-grain film, will play a major part. The 200-inch telescope will also join in the work. Addition of the Lumicon device will enable the 200-inch to be as efficient as a 1200-inch telescope.

Other suggestions to overcome bad seeing include a two-man observatory to be lifted eleven miles above California by a giant plastic Skyhook balloon. Weighing approximately one ton, FATSO (from the initials First Airborne Telescopic and Spectroscopic Observatory) could carry sufficient instruments to analyse accurately the atmosphere of both Mars and Venus in one night, using the airless Moon as a standard.

It was at another opposition, in 1877, that the two moons of Mars were discovered. Fear and Panic, better known as Phobos and Deimos, are only ten and five miles in diameter, but they enabled astronomers to calculate a really accurate figure for the planet's mass.

In 1954 an astronomical expedition to South Africa took 20,000 photographs of Mars in an attempt to unravel a few more facts about the mystery planet. Many more photographs will be taken this year—it only needs one first-class, clear photograph to settle most of the arguments about the canals.

Unfortunately, Mars is not a good photographic subject. Limited as we are by having to photograph it through a 200 mile thick layer of hot and cold air, dust, ozone, water vapour and ionized gas, much of which moves in layers contrary to one another, it is like trying to see the number on a door through a London smog. Now, if we had reached space, had set up telescopes unobscured by our planetary atmosphere, then the speculations in this article would not require inclusion . . .

As it is, we have only observations and theories to work on. Some observations seem inexplicable at the moment, whilst some of the serious theories are as intriguing as any science fiction—more so than most science fiction.

The 200-inch Mount Palomar telescope has been turned on Mars in the past ; but the resultant plates show only a fuzzy disc with the dark areas standing out as grey smears. Even these disappointing shots were taken with an exposure time of a fifth of a second, fast for planetary photographs. The plates show no signs of the famous canals.

The surface of Mars can only be seen by red light, and two-thirds of the surface is covered by characteristic brick-red areas. These show up as bright patches in photographs. Although Schiaparelli first thought that these were continents, it is now generally conceded that they are deserts ; deserts more comparable with the steppes of Tibet than the hot Sahara. The red colour has been explained as being due to iron oxide, rust-like material formed by the oxidation of iron-bearing rocks by atmospheric oxygen or ozone. This is the basis of one theory which suggests that the lack of oxygen in the atmosphere has been caused by its removal by the rocks.

Against this, however, the light reflected from the red areas is not similar to that reflected by iron oxides : it is nearer to that reflected by a type of rock known as felsite. And the reflected light is polarised in exactly the same way as light from the Moon—and from an artificial mixture of volcanic ash and dust. The infrared spectrum also shows the presence of silica compounds in these disputed areas.

There appear to be no mountains in the deserts, although some areas are believed to be high enough to become covered with a white layer of hoar-frost.

One characteristic feature of deserts—dust storms—is said to be a well-recognised Martian phenomenon. Certainly, billowing yellow clouds swirl over the surface, obscuring all details for months on end. These clouds can only be seen in red light, so they must be near the surface—up to three miles above it. Large, fast moving dust-clouds are patently difficult to reconcile with a very thin atmosphere where winds rarely exceed 20 m.p.h. As an extra disturbing factor, the light from the clouds is polarised differently from that reflected from the surface.

Unlike the red areas, the dark areas of Mars change colour periodically in rhythm with the seasons. These dark areas were once thought to be seas ; but are now thought to be lowlands. Certainly, any sizable body of water would act as a convex mirror, brilliantly reflecting sunlight. As a polar cap melts in the spring a wave of colour changes

seems to spread slowly across the planet. As a brown band moves downwards, the greys and greens of the dark regions change to reds, browns and violets. It should be noted that water causes the areas to change *from green to red*. Detailed markings stand out against the dark background and even these regions become darker.

The speed of this movement of colour towards the equator is important. The changes progress at a speed between 0.5 and 1.2 miles per hour. The favourite theory of scientists and laymen is that this cycle of tints is due to the growth and maturing of plant life, watered by moisture from the melting polar caps. 1.2 m.p.h. is too fast for water to diffuse through the ground by capillary action; but is roughly correct if the ice evaporates rather than melts. The water would form a humid layer near the ground, the moisture gradually diffusing equatorwards through the thin air.

Of course, that the change in colour may be due to moisture affecting the surface rock is an explanation which cannot be overlooked, particularly if the rocks contain metallic salts.

Certainly there is no chlorophyll on Mars. The characteristic infrared radiation is completely absent and there is no concrete evidence of plant life existing—it is simply that no one has so far thought up a better explanation of the seasonal colour changes.

As with chlorophyll, all attempts to find oxygen and water vapour in the atmosphere have failed, so that if there is any present, it will be less than a thousandth of that in the Earth's atmosphere. However the polar caps are definitely composed of ice, as shown by its infrared reflection, although this ice may be only an inch or so thick. It is not impossible for water to exist in the Martian atmosphere as ice crystals, similar to the cirrus clouds high above Earth. Such clouds would be extremely difficult to analyse by their light reflection.

Mention the planet Mars and one subject will inevitably crop up. The planet—to its credit—has sustained the greatest scientific controversy of the last 100 years. Canals. Argument, and the fierce clash of personalities, has raged over the peculiar surface markings since almost eighty years ago, when Schiaparelli discovered these apparently linear configurations covering both the light and dark areas. And—the subject of the canals is still not settled—astronomers are still attempting to see and photograph them. Until we put our observatory in space or, with more certainty, land the first expedition on the planet's surface, a riot of speculation will still persist.

For nine years Schiaparelli was the only astronomer who could see the canals, although others had previously noted streaks on the surface. Schiaparelli claimed that there were continuous lines running across

the planet for distances of 3,000 miles. There *are* markings, of some type, on the surface ; but whether or not they are true lines is still doubtful. It is worthwhile noting that these astronomers also found lines on the surfaces of Mercury, Venus and the satellites of Jupiter.

The canals—if such they be—must be 15 to 200 miles wide and they also apparently change colour as the seasons progress. The picture became further complicated when it was claimed that the canals sometimes appear as parallel double lines, 75 to 400 miles apart, and that many lines intersect at dark spots, logically enough, following the original conception, dubbed oases.

That the canals are artificial constructions was suggested by Lowell in 1894. He considered the markings too geometrical to have arisen naturally and believed that an advanced race on Mars was attempting to conserve its failing natural resources, particularly water. Lowell thought that what he saw was not the canals ; but the areas irrigated by them, like the strip of desert land given life by the Nile. The doubling of the canals was explained as being due to two channels, another being opened later to carry extra water to the expanding area of crops.

Others have suggested that the canals are giant greenhouses, conserving air and leading water down from the poles. Great pumping stations would be needed to keep the water moving. It has been estimated that pumps adequate to the job would need the power generated by Niagara Falls four thousand times over.

The possibility that the canals might be natural markings on or in the surface has fathered a whole crop of theories. One solution in 1950 suggested that the surface of Mars had formed as a solid crust over the liquid interior. As the interior cooled and contracted, the surface buckled and created folds as linear markings—this in spite of the fact that no mountain ranges can be seen. The canals might be fault-lines created by earthquakes (marsquakes) under a lower gravity. Pickering suggested that they might be volcanic cracks from which water vapour issued, or plants growing along strips watered by rain from narrow rainstorms travelling in great circles. Other astronomers called attention to the similarity between the canals and the streaks radiating from craters on the Moon—although the latter are lighter than surrounding areas whilst the canals are darker, grey and olive green. None of these theories is now generally accepted.

One particularly bright observer suggested that the canals are furrows caused by meteorites ploughing across the surface, in spite of the atmosphere. The vision of a planet being singled out to be the sole target of hundreds of meteorites, all at just the correct grazing angle and just

the correct size to plough and not disintegrate, is real fantasy. It has something in common with predestination and your fate foretold by the stars.

More seriously, a few large pieces of debris from the asteroid belt may have crashed with sufficient force to crack the surface. Following on this, a recent attempt has been made, by statistically analysing the relationship between the number of canals and the number of oases on Trumpler's drawings, to show that the canals are not natural phenomena. Then it was suggested that the linear markings are the signs of increased vegetation along animal trails—the plants being fertilized by animals moving in annual migrations, following the same tracks year after year.

However, there is an increasingly large school of thought with the creed that **THERE ARE NO CANALS ON MARS**. Nor, the creed goes, are there lines on the surface—they are only an optical illusion. The illusion idea isn't new and it may, in turn, be wishful thinking. There is strong evidence for both points of view.



Disconnected markings on the surface of Mars.



Canal "lines" when seen from a distance.

Antoniadi saw the canals when he was using a 9.5 inch telescope, but found they disintegrated into a group of dots when he was using a 33 inch telescope under excellent seeing conditions. Dollfus had a similar experience with a 24 inch telescope when the seeing became perfect. In the place of lines the surface was then seen to be covered by a wealth of very fine, delicate, detailed shading.

In general, the smaller the telescope, the greater the ease with which the canals may be seen. In telescopes larger than those available to

Lowell, the pink surface appears to be covered with streaky shreds made up of discontinuous, diffuse shadings varying in width and intensity.

In an attempt to reproduce parallel but controlled artificial difficulties of seeing, as far back as 1903 a group of children were the live part of an experiment which did seem to show that discontinuous markings would appear continuous if seen from a sufficiently great distance. A number of shaded areas, short lines and dots were drawn on a disc and shown to a class of boys, with instructions to draw what they saw. Those at the back of the class connected up the main features with straight lines—resulting in canal charts remarkably similar to Lowell's and Trumpler's maps of Mars.

However, there is still a minority of astronomers, mainly American and French, who stick to Lowell's ideas. Some of them claim to have seen the canals in the 36 inch Lick telescope and the 100 inch Mount Wilson telescope at the 1924 and 1939 oppositions.

So far, photography has not resolved the canals—or the two points of view. Both parties claim that photographs prove their own theories. One day, we know, we shall find out the mysteries beneath the thin atmosphere of Mars. And, in the true scientific spirit, the truth is what we seek.

But there is a strong feeling that it is far more interesting to speculate on whether Mars could be the home of the best-swordsman of two planets, where crystal fountains tinkle along the lazy canals and the twin towers of Helium rise to challenge the ochre vastness of the dead-sea bottoms.

Kenneth Johns.

Model-making is an exacting and highly technical art and few people can have failed to thrill at the sight of a model galleon or windjammer standing proudly on a connoisseur's mantelshelf or in the taverns around any seaport. Someday in the future other model-makers will carve spaceships with equally loving hands.

THE LITTLE FLEET

By Dan Morgan

It was early morning. Charlie's bottle-sloping shoulders were hunched forward, his round face dreaming as he carefully rubbed a duster over the already shining surface of the model on the counter before him.

The snack bar is right across the road from the main gate of Amer-sham Field. Crewmen gather there during off duty hours, swapping tall tales, legends and just plain lies, whilst Charlie stands behind the counter listening, polishing and selecting the pieces to be added to his own private dream.

A transparent plastic shelf runs all round the walls, about seven feet from the floor. Set at careful intervals along the shelf, light from the fluorescents reflecting their gleaming perfection, are the solid manifestations of Charlie's dream. He made every one of them with his white scrubbed, stubby little hands. Each tiny detail picked ou

with such unbelievable precision that the observer finds himself imagining that at any moment the blast-off signal may sound for the little fleet, and its tiny motors roaring, it will head for the stars.

It almost did, once.

The models start at the left of the doorway, tracing the history of spaceflight in miniature. First comes the modified V2, then the other unmanned jobs, up to the first orbital rockets. After that the Mackell series, brutes of steel and fire that killed four out of five of the fanatic devoted men who tried to tame them. They range right on through a perfect reproduction of Amersham's first Moon ship, until their lines change from the old dart shape to the clumsy looking dumbbell of the modern interplanetary liners.

There was nothing particularly historic about the ship Charlie was polishing, but it was the centre piece of the collection with its own place of honour behind the counter. It was a tanker, the type of craft that roared its clumsy way up out of the pit of gravity from Amersham field every day, carrying fuel to the satellite.

Charlie's father piloted one of those ships, until one day fifteen years ago, when a new star flared briefly in the clean, blue air of the desert . . . and died.

"Morning, captain!" Pongo Stimson thrust open the door and marched up to the counter. Pongo had a grinning *Mardi Gras* mask of a face and a reputation among the crewmen as a great kiddier which he worked hard to maintain. Ed Blair, his companion, was younger. He had just returned from his second trip out and still held the brawling veteran in a kind of hero worship.

"Still polishing, Charlie—don't you ever get tired?" Ed said.

The little man's eyes struggled back into focus as he looked up, his face breaking into a smile that conveyed the bright, unalloyed joy of a five-year-old child. "You're joking, Mr. Blair."

Ed reached out a hand towards the model on the counter, but Charlie, his face clouding, forestalled him. Holding the shining thing close to his chest, he backed away.

"Now, now, Ed—mustn't touch," Pongo said. "The captain doesn't like anybody messing around with his ships. I remember one time he threw a bowl of soup over some character who started lifting one of those Mackells off the shelf."

Charlie flushed. "It was a milk shake, Mr. Stimson. And besides, the customer was drunk." He turned and hung the little tanker carefully in its place. They did not understand. He was pleased to have them look at the models, that much he was willing to share, nothing further.

The coffee machine hissed like a captive dragon. Charlie turned and placed two steaming cups on the counter in front of the crewmen. "You just come in on the early ferry?" His voice was soft and high, with an infinite wistfulness. "How is that Mark XV Gershen Drive working out?"

Ed picked a bun from its plastic cage. "Who told you about the Gershen?"

"There's not much the captain here doesn't know about the corporation ships." Pongo showed a lot of ivory teeth and red gum. "He can give you the schedules of any run you like to mention, the names of the ships and a lot of their crews."

Charlie wiped a ring of coffee from the counter with a cloth. In his imagination he had made all the runs a thousand times; in towards blazing Sol and the wizened over-ripe grape of Mercury, and out to Pluto, a frozen pebble on the edge of the great dark. One day, if he worked hard enough, he would make them in reality. The models helped him, they were a solid bond with his ambition, something that he could reach out and touch, but someday he would outgrow them. Charlie was gone and away, his moon face dreaming as he stood there, cloth in hand.

Pongo nudged Ed. "You still taking that correspondence course, captain?"

"Er, yes." Charlie started slightly. "I keep working at the lessons, but Astrogation isn't an easy subject to try and pick up in your spare time." He frowned, his smooth forehead wrinkling. Astrogation was the fifth course he had tried, and he had almost reached the familiar stage where his mind began to flounder under the growing complexities. Soon he would be forced to move on to the next speciality on the dwindling list; hoping again when he opened the new quarto envelope with its sheaves of instruction and long book-list that at last he had found the outlet for whatever natural abilities he possessed.

Only in his darkest hours, lying trembling in his bed, did Charlie admit the other possibility to himself; that he might go on to the end of the list without finding his vocation; that he, with his fluttering, romantic mind might never be a crewman.

"You spend too much time studying," Pongo said. "You must be over thirty now. If you wait much longer, you'll be too old."

"No fooling, Charlie," Ed said. "What are you hanging around for? If you really want to get out into space, why don't you get cracking and do something about it?"

"You know they won't look at anybody who hasn't already graduated in one of the speciality subjects." Charlie's eyes drooped to the counter, he had never even attempted one of these examinations. So

strong was his fear of failure that he felt one abortive attempt would wreck his chances forever. He had never dared to take that risk.

Pongo wiped crumbs from the edge of his mouth with the back of his hand. "You mean you haven't heard?"

Charlie leaned forward eagerly. "What? What are you talking about?"

Pongo spoke with deliberate slowness, conscious that he held the complete attention of his audience. "This new passenger liner they're assembling up at the corporation satellite. She's about ten times the size of anything in operation now, which means they are going to be short of qualified men when the time comes to give her a crew. I heard that they are going to forget about red tape for once. But then, you wouldn't be interested, you've got a good steady job here." He pushed his empty plate forward. "Get me some more toast, will you?"

Charlie ignored the plate. "What do you mean, forget about red tape?"

"Oh, it's not important." Pongo's air was carefully casual as he smiled into the slightly protruding eyes of the little counterhand. "Apparently they've figured that with a ship that size it won't be necessary to use trained crewmen as stewards, like they always have before. They've got room enough aboard to carry all the people they want, so no doubling of jobs will be necessary. The way I see it, Personnel will be putting out a call for men soon, and the only necessary qualification will be experience in the catering trade."

Charlie felt slightly dizzy, and the muscles at the pit of his stomach fluttered. He turned in appeal to Ed. "Is this true?"

"Why not forget about it, Charlie? Even in a ship like that, space travel is still a dangerous game," Ed said.

Charlie looked up at the model tanker. He wanted so much to believe. Surely Pongo would not joke about something as important as this? And the other one, Ed; he was a nice kid, still not far enough from the realisation of his own dream of becoming a crewman to have the heart to smash another's similar ambition. Signing on as a steward was not quite what Charlie had wanted, but it was a start, a way of getting out of this day-to-day rut.

The door of the place opened to admit three more crewmen. Pongo caught Charlie by the sleeve and murmured to him confidentially. "I wouldn't mention this to anybody, if I were you. Nobody's supposed to know about it yet."

Charlie nodded solemnly and made his way to the other end of the counter where the newcomers were howling for service.

Ed looked at Pongo for a moment, a slight frown on his face. "Sometimes I think you'd saw your grandmother's arm off for a laugh."

The other chuckled. "That's an idea."

The rest of the morning passed slowly for Charlie. He did his work mechanically, most of his consciousness occupied with his wildly roving thoughts. Finally, several broken cups and switched orders later, it was two o'clock.

The security guard on the main gate of Amersham Field nodded to Charlie with a smile. Officially, nobody was allowed to enter without a pass, but everybody knew the little counter hand. His head bent slightly forward he walked quickly across the tarmac towards the Administration building which lay shimmering in the afternoon sun.

"Yes?" A neatly coiffured ice-blonde looked up sharply as Charlie entered the outer office of the Personnel Department.

Charlie hesitated, an almost overwhelming desire to bolt gripped him. He twisted his stubby hands together. Perhaps Pongo *had* been kidding. But then, if he didn't try he might never know—and a chance like this must not be missed.

"I'd like to see Mr. Van Kleet." He managed to get the words out at last.

The blonde tapped a pencil on the desk top, surveying him without enthusiasm. "Do you have an appointment?"

"No, but tell him Charlie Foster would like to see him, please. It's about a job."

One blonde eyebrow raised. "The Personnel Manager is a very busy man. You'll have to fill out an application form in the usual manner. He doesn't interview every individual who comes asking for a position, you know."

"But I've got to see him," said Charlie, hopelessly.

Her lips were set in a thin line as she pointed to a pile of forms on a nearby table. "Mr. Van Kleet sees *nobody* without an appointment. If your application is put through the usual channels you will hear from us in due course."

Charlie looked down at the forms. He had seen them a hundred times before, and dreamed many more times of filling in the first blank space with the words: *Crewman Class Two*. The print blurred and flowed together. He turned back towards the secretary. He *had* to make her see, he *must* convince her.

And then, suddenly as if nothing had happened in between, he was standing inside the door of the inner office, the girl behind him shouting "Come back! You can't go in there!" Shouting and yelling her darned fool head off, when all he wanted to do was to talk to her boss.

James Van Kleet, Personnel Manager for the Interplanetary Corporation, was a large, fair-haired man with an air of sleepy power. He laid the papers he had been studying down on his desk.

"All right, Miss Bridger," he said, unhurriedly. "I'll take care of this. There doesn't seem to be much point in you standing there telling this man he *can't* come in—he's here."

The secretary retired, closing the door behind her, and Charlie was alone with the Personnel Manager. He found he had no words, his mouth seemed dry and stiff.

Van Kleet smiled, the corners of his eyes wrinkling. "Come and sit down, son. What's your name?"

"Charlie Foster, sir."

The sleepy eyes sharpened. "Your father was a tanker pilot?"

"That's right, sir. Did you know him?"

Van Kleet looked down at the desk top. "Yes, I knew him . . . and your mother. I was the one who had to tell her after he was killed. She refused to accept the pension offered her by the corporation. Does she know you're here?"

"She's dead—two years ago," Charlie said. Ma had hated the corporation, in fact the whole conception of space travel, with an intensity that had given her mind a brittle hardness just short of psychosis. But she had been a good mother, a thin, hard-working little woman with a fierce independence of spirit. Charlie had learned at an early age to keep his passionate interest in the forbidden topic hidden, and later, to conceal the models he was building in a cupboard in his room, bringing them out only behind locked doors and gloating over them with a thrill of guilt.

"I'm sorry," Van Kleet said. "What can I do for you?"

Charlie leaned forward, placing his hands on the edge of the desk. He began to talk, incoherently, stammering at first. But soon he was carried away by the dream, expressing the thing he wanted in words as fluent as those of a man talking of the woman he loves . . .

Charlie pushed open the door of the snack bar and walked towards the counter. His face was serious and withdrawn, one hand in the pocket of his jacket. He looked up at the shelf. It was like coming back to a room full of old friends, dependable and undemanding.

Pongo turned. "Well, if it isn't the captain back again. How did it . . . ?" He stopped and lowered his eyes to the counter as he saw Charlie's expression.

"You never should have told him about it," Ed whispered urgently. "Poor little devil, can't you imagine what a disappointment it must have been for him?"

"Aw, Ed, I was only trying to . . ." returned Pongo. But just at that moment, Charlie was not particularly interested in people. He walked along to the counter flap, oblivious of the looks and whisperings of the two crewmen, and ducked underneath.

"What's the matter?" said Joe, who was serving. "You didn't get enough work this morning, or something? You're not on again until seven."

Charlie gave no sign of hearing the question. He crossed to the suspended model of the tanker. Carefully, one hand supporting the little ship, he unhooked the wires. Fondling it, feeling the cool, clean shininess with the soft skin of his palms, he laid it on the counter in front of him.

This was his, a thing he could control and manipulate, like a piece of his own being. Up there on the shelf too, they were a part, the important part of his life. There was no greater, more comforting reality than these, his dreams.

Pongo lowered himself from his stool and walked softly along the counter. For once, there was no laughter in his voice. "I'm sorry, Charlie. But honestly, I thought they might give you a chance."

Charlie's eyes were on the tanker, his face pale and serious.

"Leave him alone, Pongo!" Ed grabbed the big man by the arm and pulled him away. "Haven't you done enough damage?"

The two crewmen walked out of the snack bar arguing loudly, leaving only the two counter hands.

"What's the matter with those characters?" asked Joe. "Life is so short, but they spend most of it fighting and quarrelling." He looked around the deserted room. "Well, this looks like being one of *those* afternoons. If you'll take over for a minute, I'll nip out for a quick smoke. Okay?" He walked through the door into the kitchen.

Charlie breathed a long sigh. He picked up the little tanker and placed it back in position, the wires adjusted delicately to give a dynamic illusion of flight. Pulling the piece of paper from his jacket pocket he ducked back under the counter flap and walked over to the pay phone booth. He picked up the receiver and dialled. A moment later a female voice answered.

Charlie stood looking at the receiver, his eyes slightly misted. The note of interrogation in the female voice grew sharper as Charlie hesitated. The paper in one hand, the phone in the other. But it was no good, he would never be able to explain, not in any way that would make sense to Van Kleet.

Best forget the whole thing, pretend it never happened. He placed the phone back in its cradle, breaking the connection.

Space isn't an absolute vacuum and to a spaceship travelling at many times the speed of light strange things are likely to happen. For instance, as Mr. Rayer here surmises — it may be impossible for the voyagers to land on any planet including their own once such vast speeds have been attained.

ERROR POTENTIAL

By Francis G. Rayer

Illustrated by HUTCHINGS

Sam's hand closed over a shining lever at his side and the forward tubes began to murmur with thrust that would eventually end the three-hundred days journey of the *Greenflax* across space. Ahead and below through the control room port, and pin-pointed by instruments across twenty light-years, lay their target : an Earth-type planet circling a sol-character sun.

"Landfall, Captain," a man's voice said behind him.

Sam did not look round. "Get me Captain Payfold on the radio."

"Yes, sir."

Steps departed and Sam scanned the multitude of instruments at his elbow, and the planet below. A remote white glimmer suggested polar ice. Nearer, cloud obscured land-masses and oceans. Promising, Sam thought. He would have hated to come twenty light-years to find calculation and instruments had been in error. But then, they never were.



The altitude meter had dipped fractionally below 1000 miles and he corrected automatically. Orders said preliminary investigation was to be at 1000 miles, and the *Greenflax's* sister ship *Solinox* was visible a mile to his flank at correct altitude, a silvery mote that had stayed near for ten long months. Sam hoped Captain Payfold would not relax from following instructions to the letter now that planetfall was in sight.

Tomlinson came back into the cabin, hasty even beyond his usual quick briskness.

"We can't raise the *Solinox*, Captain Rivers!"

Sam turned his gaze from the green and brown below. "Why not?"

"They don't answer!"

Sam sought for explanation on his second-in-command's youthful face and found none. Tomlinson's vividly alive eyes strayed through the port to the *Solinox*, and returned.

"She looks safe enough, Captain," he offered.

Safe, and riding level, with a thin plume of vapour from her forward tubes, as there should be, Sam saw. Perhaps her operator was momentarily on other duty, or watching the planetary surface unfold.

"She does," he agreed. "Try again."

Alone, his gaze travelled once more over the uncountable dials, gauges and indicators. Ten months were a long time for four men in a ship, he thought, and Captain Payfold's operator could be excused on that ground alone.

The *Greenflax* was smooth and steady as if those twenty light-years had been a mere hop to a planet in Earth's system, he noted with satisfaction. Nothing showed that for almost ten months she had been pushing through space at a relative velocity nearly thirty times that of light itself. The winds of the void that had screamed past her hull had left no mark. It was ironical that the only accident had been a mere twenty-four hours before, when their speed was only several thousand miles per minute. The meteorite had been no larger than a pea, but had passed through the ship like a bullet through butter. One man had been in its path—Waterlow, whose genius had discovered an Earth-type planet across those twenty light-years of space, and whose technical ingenuity had given the ships devices making the journey possible.

Sam jerked down the switch of the control cabin communicator. "Any luck with the *Solinox*?"

"No, sir." The radio operator's voice sounded metallic. "I tried immediately Mr. Tomlinson fetched me from watching in the sick bay, but they don't answer."

"Try a blinker light on them."

"I will, sir."

Sam hesitated with his thumb on the switch. "How is Mr. Waterlow?"

"Pretty bad, sir, I'd say. Still unconscious."

"Very well. I'll have Tomlinson watch him while you're signalling."

It was rotten luck on Waterlow, Sam thought. Within sight of the planet he had discovered and named, then, *pisst*, a tiny fragment of immeasurably hard debris through the shoulder too near the heart. The ship's warning system had bleated; they had plugged the holes that whined atmosphere into space. But living flesh was not thus easily repaired.

Watching the planet Waterlow had named Cenis, Sam evaluated the morale of his crew. It was good. Tomlinson was smart, quick and reliable. The operator, Sparks Robart, methodical, slow of speech, but utterly to be trusted. The ship herself was as nearly foolproof as any mechanical device could be.

He scanned the gauges and examined the *Solinox* for any sign of her signal lamp. Captain Payfold was a good man, but sometimes stubborn and hasty. If all was well he was capable of ignoring the blinker and sending his operator back to the radio in his own good time.

Sam depressed the switch that gave him Robart. "Ask them to acknowledge at once—if they can drag themselves from the view!" he snapped.

Irritation at Payfold's silence made his lips a thin line in his lean face. Confident himself, ready to take whatever came, he nevertheless believed in the wisdom of routine. The *Solinox*, speeding sweetly on, but silent, and with her blinker light dead, was exasperating. He noted that her altitude was a trifle under his own, looked at the meter, and saw he himself had dropped to 990 miles. Then Morse flashed, a distant pin-prick, and was gone. Almost at once the communicator awoke with Robart's voice.

"All in order, Captain."

"Then why the silence?"

"Their receiver antennae circuit was burned out, Captain. They're repairing it."

"Very well. Send Mr. Tomlinson here from sick bay."

He waited, pondering on the immense strength yet utter fragility of the two ships. Strong as man could make—yet depending upon hair-thin wires for light, communication, instrumentation. Lucky that meteorite had damaged nothing, he thought. But damnably unlucky Waterlow had been in line with its fantastically rapid trajectory through space.

When Tomlinson came Sam went into the tiny sick bay. Waterlow had not moved. His face was white, his eyes closed, his breathing so shallow that the bandaged shoulder scarcely stirred. Sam took his pulse and nibbled his lower lip. The speed of the meteorite could only be guessed, and the hole it had made was unpleasant. He was not sure Waterlow would live. All the warning devices and complexity of instruments with which he had fitted the ships had not saved him. Its metal mischief done, the particle had carried the stain of living blood into space.

Back in the control room, he saw that the *Solinox* was even lower. He thumbed the button to Robart.

"Get Captain Payfold if the radio's working?"

There was delay, an interchange of signals, then Payfold's brisk voice, with its undertone of stubbornness.

"Captain Rivers here!" Sam could not keep the snap from his words. "We are supposed to maintain 1000 mile altitude until we have circled Cenis once!"

"So the slide-rule men said, Captain Rivers."

A severe background of static failed to hide the perverse undertone and Sam felt annoyance. Payfold believed sufficiently in his own opinion to disregard instructions.

"What they say is good enough for me!" Sam snapped. "They found Cenis, analysed probable conditions under almost impossible difficulties, and fitted out the ships well enough to get us here! They specified a thousand mile altitude—"

"Which is nearly a thousand miles too high to see anything useful, Captain Rivers! There's no sign of any artifact or civilisation." Static blurred some of Payfold's words. "So why not go down? Back on Earth they anticipated every danger. Now we're here we can see there is none."

"Then you won't keep to their landing instructions?" Sam demanded.

"Not if I think it best to follow my own judgement."

The radio went dead, leaving Sam scowling at the microphone grille. During their ten months in space he had realised that a certain glory must inevitably surround the first man to tread this new planet, first outside the solar system. Payfold wanted that honour, and was stubborn enough to disregard instructions to get it.

The reproducer from the radio room awoke with Robart's voice. "Sorry to cut you off, skipper. A fault in the receiver."

Sam realised the background static had gone with Payfold. "Inform me when it's cleared."

Somewhere in the ship a thin *beep, beep* commenced, echoed abruptly in the control cabin as a relay in the instrument panel closed. A red panel lit: *General danger warning*.

Another meteorite, Sam thought. *They're thick here!*

If so, the sound of impact had not reached him. But the strike could have been anywhere in the ship's mid or aft sections, tripping warning circuits as pressure fell.

At the control room exit Tomlinson met him. His gaze flashed to the red panel and back.

"What happens, Captain?"

"Another hit perhaps."

The second-in-command's fair head shook. "I heard nothing amidships."

"Then perhaps it's at the stern!"

Sam hurried along the narrow corridor, wide shoulders brushing the steel walls. The fragment that had struck Waterlow had made a sound reminiscent of a high-velocity bullet piercing a tin-can. For'ad was the control equipment. Near, high amidships, the radar and radio. A strike there, or in the storage cabins flanking the corridor, would have been audible.

The *beep, beep, beep* followed them, taken up anew in each section as they hurried to the stern. The ship was long with many bulkheads to give essential strength, and divided radially and lengthwise into a score of hermetically-sealed compartments. No whine told of escaping air. They looked into each cabin, into the fuel storage space, and the rocket servicing alleys aft. There, Tomlinson dropped the plug of metal and welding torch he had carried and crept round the catwalks while Sam checked every dial on the fuel and coolant tell-tale boards.

Tomlinson emerged like a cat from a hole. "It wasn't a meteorite," he stated.

Sam listened to the repetitive *beep, beep*, momentarily undecided. The mass of gadgets in the *Greenflax* gave warning—but it was up to one of her crew to locate and correct the damage, defect, or breakdown. A general warning meant something serious. That was all he knew.

"We'd better check everything systematically!" he decided.

The air was sound, the purifiers working. No smoke or hint of leaking fuel caught his nostrils. The *beep, beep* followed him into every cabin and through every narrow corridor and examination tube of the ship. Frustrated, he returned to the control room, saw the red panel was still illuminated, and began to comb the ship again. When he entered the radio cabin he saw that Sparks Robart had a big panel off.

"Burned out antennae circuit, skipper," Robart said.

He indicated the wiring and inductances with a screwdriver. Sam eyed it cursorily. Sparks Robart was young, but reliable and wholly to be trusted. Sam liked him. There was no personal animosity, conflict, or quarrel anywhere on the *Greenflax*. Men able to spend ten months in space were not given to pettiness.

"First time I've seen the like of this," Robart said. He began disconnecting leads, and cocked an ear at the door, his smooth round face quizzical. "Trying the warning system, Captain?"

Sam grunted. "The ship's system had jumped on something we can't spot. Will you leave that and ask the *Solinox* by blinker to have a look at our outside."

He left Robart flipping the Morse lamp and burrowed through each of the midships storage cabins, crammed with strapped crates of food and every kind of gear men or ship might need. All was in order.

Robart came out of the radio cabin with his face animated. "Captain Payfold has got a general danger alert as well!"

"He has!"

"Yes, sir! Norris was setting his blinker when I signalled. Captain Payfold wants you to look his ship over from the outside and to ask Waterlow for a guide."

"Mr. Waterlow is still unconscious."

"So I told them, sir."

Back in the control room, Sam closed his ears to the endless bleating of the warning system and manoeuvred the *Greenflax* slowly round the *Solinox*, studying her from every angle. If there was external damage, a man could go out in a suit, or in the space tug. But the *Solinox's* silvery shell was intact and perfect.

The two ships drifted into the old relative positions and Sam went into the radio room.

"Tell them their hull is perfect."

He read the reply as it came back at forty words per minute: "So is yours."

Robart paused, lamp out. "Captain Payfold is burning Norris up."

Sam listened to the *beep, beep*, and scowled. "Ask him if he's got any idea of the danger."

The talking beam flickered and glowed. "Captain Payfold says why the hell can't Waterlow explain!"

Sam let it pass. Payfold was growing irritated, but knew Waterlow was gravely injured. The distant glow on the *Solinox* began again:

"I may land."

Sam took the lamp and snapped back: "Why?"

The flickering reply was almost as fast as Sam could read. "Because that's what we damn well came to Cenis for!"

That—and for glory, Sam thought. The glory was inevitable, and Payfold knew it. He stifled a retort, spelled out slowly "It is against instructions to land with an uncleared fault," and put the lamp back in Robart's hands.

"It would help if Waterlow could talk, Sparks," he stated and left Robart to his repairs.

The sick bay was a tiny cubicle in the quietest part of the ship, and Sam ascended a steel ladder clamped against the corridor wall. The *beep, beep* followed him, fading a little in volume, but unvarying in frequency.

Waterlow's broad forehead was the colour of white chalk. Flat on his back in the narrow bunk, he breathed shallowly, eyes closed, lips parted and bloodless. Sam dropped on one knee, lips near the injured man's ear.

"Waterlow—"

No movement or change of features showed the word had penetrated the blanket of deep unconsciousness. Sam tried again, realised the attempt was useless, and rose. Waterlow, young designer of the ship's warning system, would certainly not obey Payfold's summons.

Outside the sick bay the *beep, beep* was louder, even more insistent, Sam thought. Tomlinson was emerging from the ladder sink and his brows rose with a question.

Sam shook his head. "He's in a bad way. We'll have to comb the ship inch by inch until we find what tripped the warning system."

During the hours that followed, Sam began to wonder whether the irritating *beep, beep* would ever be brought to an end. In all the length and breadth of the *Greenflax* no fault could be located. Nervy from the endless bleating, he summoned Robart into the control room. He jerked a finger at the red panel.

"Can you follow the wiring and find what device is initiating this?"

Robart stroked his jaw pensively. "Mr. Waterlow was the safety devices expert, Captain."

"He's out. Do your best."

For the third time Sam departed to examine the stern sections round the main propulsion tubes that had hurled the ship beyond the barrier of light speed. Everything was intact, perfect, and undoubtedly ready to awake again with thunderous thrust if he operated the drive controls. He had completed a painstaking search on hands and knees when Robart fetched him. Part of the control room panel had been removed, and at least a hundred coloured-coded leads ascended from the warning devices and remote indicators into a conduit tube integral with the nearest bulkhead. Robart took him to a tiny space above, indicating a triangular section filled with connection boxes, relays, and a multitude of leads which disappeared into other conduits in every direction.

Sam wriggled back out of the hole. "You can't do it?"

"No, sir." It was an honest admission of failure. "All the wiring goes through the ship's structure. Most of the gadgets are fitted in odd corners useless for storage. Give me six months and I might make sense of it. Under that—no."

Sam looked again into the actuator and relay compartment, which reminded him of a city telephone exchange compressed to pocket-size. He withdrew his head and closed the manhole cover.

"Go ask the *Solinox* if they've found anything."

Alone, he listened to the *beep, beep* that never ceased, and then descended to the control room. A circuit fault was impossible. In no circumstance could it arise simultaneously on both ships. Moreover, the warning circuits had automatic indicators which called attention to conditions of internal circuit fault. Thumbs in belt, he scowled at the red tell-tale until Robart's voice came on the control room speaker.

"Captain Payfold has not located any defect, and states he intends to land."

"Tell him not to do so!" Sam felt his nerves, jangling from the eternal *beep, beep*, draw tight. "Tell him it is against orders!"

There was a delay. "Captain Payfold says his position is one of equal command," Robart's voice stated at last. "In his opinion landing is now justified, and he intends to go down."

Sam swore. "Tell him it is without agreement from me!"

He sat on the bucket seat before the lit panel and mentally checked the warning systems he knew. *Ship air pressure*. There was no leak. *Air condition*. Perfect, free of any suspicious taint, and correctly balanced. *Fuel*. Safe and in order. When he had finished the list the *beep, beep* still intruded itself. The ship knew more than he himself, Sam thought ironically. A pity she could not talk. Every possible examination had been made from inside. His next move could be a detailed check of her outside.

He had half risen when Tomlinson's voice came rapidly from the grille. "Can I see you in sick bay, Skipper?"

"Coming!"

Sam hurried, shoulders brushing the steel walls. Tomlinson's voice was uneasy. Hastening up the ladder, Sam wished someone aboard either ship had medical skill. Medical stores and instructions were available in plenty, but no man able to treat a deep wound with the specialised care it needed.

Tomlinson stood in the narrow door, hands on the cold metal and his usually animated face grave.

"I think you're too late, Skip."

He moved and Sam went in. Waterlow was pale, still, in the same position—and not breathing. Sam examined him and drew the cover over his face.

Outside the sick bay, he closed the door. No one on either ship could have saved Waterlow.

"We're on our own, then," Tomlinson said quietly.

Sam listened to the repetitive beeping and nodded. Waterlow, only man who fully understood the intricacies of the complex warning devices, would never explain, now. A ship held too much gear for any one man to have a full and specialist knowledge of it all. Button-pushing was easy; the ability to state what happened another matter.

The *beep, beep* was loudest down at control-room level. Sparks Robert came from the radio room.

"The *Solinox* states she definitely intends to land, sir," he said.

Sam mentally cursed Payfold's perversity. "Report to them that Mr. Waterlow is dead, that the general warning is still in action, and that I refuse to come down with them!"

Setting down a ship was a long and complex job. The routine in instructions occupied many hours, and a general warning always delayed any stage until the danger was cleared. Chewing his lip, Sam realised that he was trusting the ship's devices more than Payfold's judgment. Payfold, not without some justification, decided all was in order and it was time to go down. The ship said something was not in order . . .

From the nearest port Sam saw that the *Solinox* was slowly beginning to lose altitude, breaking the twin formation for the first time in ten months. Below, Cenis was quiet and beckoning. High power binoculars revealed no road, city, village, or product of civilisation. No light of any kind had glimmered on her dark side, and no radio emanated from her surface.

"Shall we go down with them, Captain?" Tomlinson asked behind him.

Sam put aside the binoculars. "No! I'm going in a suit to check our hull!"

The second-in-command looked through the port at the mottled surface below. "You believe in the ship's gadgetry, Captain."

"Absolutely, until I've proof otherwise. Waterlow always knew he'd come, and a man doesn't fool around with his own skin. The ship says danger. If we can't spot the cause inside, then it's outside—if we've wit enough to find it!"

"The *Solinox* couldn't see anything wrong with us, nor we with them."

"That's not conclusive."

Sam started down the narrow corridor. Tomlinson shrugged and followed. In his glance Sam noticed a little doubt, and something of

envy. The distrust would be for the *Greenflax's* warning ; the envy for their opposite numbers in Payfold's ship, now to be first on Cenis.

The suits were of highly flexible reinforced plastic, but awkward because of their thickness. Sam climbed through the neckhole and pulled the suit up, worming his hands down to the integral gauntlets. Straps secured magnetic sole-plates that made walking round the outside of the ship possible. He abandoned the radio pack as unnecessary, and Tomlinson helped lower the spherical globe of insulated material over his head and secure it on its seating.

Alone in the air lock, Sam watched the outside pressure drop, and felt the suit begin to balloon to its rims of brading. Space and lock pressures equal, the red light on the lock door went out. He swung the door open and moved cautiously through.

Cenis was below the ship, almost hidden by the bulging metal. The sun was high, shining on the steel so that his eyes hurt, and he walked slowly up like a fly on a wall, conscious of a queer prickling in his scalp and aware that a few pounds of magnetic attraction were his only link with ship and life itself.

On top of the *Greenflax* he studied the hull minutely. As the minutes passed he found no fault, and began to realise he would indeed discover none. The hull, brilliantly silver on her sunward side, inky black beyond, was perfect. Neither sunshine nor the prying beam of his torch could find scratch or defect. Top half, port and starboard, were smooth and clean as if the ship had never threaded twenty light years of space. He worked down methodically to the ports half-way, examined the two tiny meteorite holes, plugged from inside, and began to go down under the ship. Here, Cenis shone back reflected light on the vessel's dark side.

The prickling began again, almost an actual movement of his scalp. The planet-light was dim, and he snapped on the torch again, plodding like a man with feet in glue. His hair prickled again and he frowned, hung the torch on his belt, and checked the fishbowl fastenings. A faint, ghostly halo hung round his hand.

He wagged his fingers before his face, breathing momentarily halted. The halo was brightest at his finger-ends. He held a hand above his head, and extend a finger. A corona of electric fire danced round the gauntlet point, blue and wavering. He placed both hands on top of the fishbowl, felt his hair lie down ; removed them and experienced the creepy pull of each hair standing up.

Only the bottom of the ship ! he thought. *Because there he was near Cenis !*

It took fifteen minutes to reach the air-lock. As he moved round the ship away from *Cenis* his hair began to settle and the corona discharge round his hands faded, then was lost completely in sunlight. From the lock he looked back, craning to see the underside of the ship. A hazy purple line of electric fire hung along her.

Sweat trickled down his face as the inner pressure slowly filled the lock. He jerked open the door the moment the red light faded, and dragged furiously at the screw fastenings of the suit headpiece. The *beep, beep, beep* again filled his ears. It had never ceased—and the damnable thing was, that the ship was right, he thought as he yelled for Robart and Tomlinson.

Robart came first. "You've found something—"

Sam cut him short. "Get the blinker on to Payfold and tell him not to go lower!"

"But—"

Sam almost pushed him into the corridor. "Get moving!" The ship was right. That made Payfold wrong!

Robart had clattered from hearing when Tomlinson came in. "We're maintaining altitude?" Sam snapped.

"Yes, sir."

"Then see we do!"

"We're on automatics."

"Good!" Sam felt momentarily more safe. "How low has the *Solinox* got?"

"She'd dropped a good many miles when I last saw her."

"I see."

Sam went into the control room. Payfold's ship was abreast, but much lower. No flicker of Morse came from her. Tomlinson stood in the doorway looking puzzled.

"You've found what's wrong with the ship, Skipper? Or it's something on *Cenis*?"

"No," Sam kept his gaze on the *Solinox*, hoping the light would come. "The ship alone is sound and perfect. So is *Cenis*, for all I know. But bring the two into proximity—and you get the damndest most enormous electrical potential-difference I've ever met! A few million volts will spark a few feet. Given a good thunderstorm on Earth, we get lightning miles long. I've stood on a high building and felt my hair on end. But here—a thousand miles is scarcely enough!"

Breathed hissed between the second's teeth. "Between us and *Cenis* there's a voltage difference, just as between thunderclouds and Earth—"

"Exactly." No Morse had yet appeared from the *Solinox*. "The reason may even be similar. Space isn't absolute vacuum. You can rub electrons off ebonite with a flannel. The wind rubs plenty off thunderclouds, until the voltage breaks down the atmosphere's insulation. Our trip from Earth has had a similar result. Plenty of particles are scattered over twenty light-years of space, our speed was high, and the medium a perfect insulator. An ideal set of circumstances!"

The cabin speaker came to life. "Robart here. They don't answer."

Payfold's stubbornness, Sam thought. "Keep trying, Mr. Robart. Worse things than fused antennae circuits can come from this! If they don't answer I'm going across in the tug."

Sunlight streamed through the transparent nacelle of the tug as it drifted out of the lock. Sam felt electrical tension return as the shading influence of the *Greenflax* ceased. A dull *phut* sounded on the tug's panel, and a spring fuse indicator flipped up a red tab. A halo of shimmering mauve light hung at the tip of the vertical aerial rod for'ad.

The tug gained speed under the drive of her tiny thrust motor, slanting obliquely on course towards the planet below. Sam noted that the *Solinox's* reduction in altitude had greatly increased the distance between the ships. His scalp twitched and raising a hand he felt his hair rising under the tension of the frictional charge that had already blown the radio. When he peered through the nacelle at the remote *Solinox* minute sparks crackled from his hair to the transparent wall. He adjusted Robart's lamp and began signalling. Payfold would surely reply if he saw the tug. But no answering blink came from the ship, trailing a thin haze from her steering tubes into the near vacuum.

Sam put down the lamp and gave the tug more speed. An irregular spluttering began on the control board, and he saw static sparks leaping the fused antennae circuit, some to the ground of the board's metal brackets. The oppressive feeling of tension increased, as preceding a thunderstorm before the mounting potential broke down the insulation of the air, and neutralising bolts sped between opposing poles of cloud and earth. A corona of static hung round the tug's bow, and wavering fingers reached from the aerial rod.

Half way between the ships, Sam looked back. The movement brought one hand within a few inches of the plastic nacelle and a spark snapped over, tingling like the discharge from a leyden jar. He withdrew hastily, re-estimated the distances, and saw that the *Solinox* was travelling fast, leaving him midway upon a continuously lengthening course. When he returned his gaze to the *Greenflax* he saw that

static was ionising his rocket trail, so that a long purple serpent snaked after him.

With more thrust the distance to the *Solinox* diminished, became stable, then slowly grew again. Ozone smelt strong from the spitting discharge of the antennae circuit, and Sam knew he had failed. He was either unobserved, or Payfold was deliberately running from him. An SOS with the lamp brought no answer. Sam grunted to himself, and took the tug up and back in a long curve. Damn Payfold's stubbornness, he thought angrily.

Back on the *Greenflax*, Sam wondered if here at last was a problem he could not surmount. Courage, confidence, and a rather venturesome self-assurance had gained him his position as Captain, but were unable to help now. With the ship set on a course which would keep her above the *Solinox*, but at full altitude, he stood scowling at the instruments, aware of the red warning panel and unceasing *beep, beep, beep* from equipment that had detected the vast potential difference between planet and vessel.

Tomlinson came in, his quick features moulded into resignation. A sheaf of typed figures was in one hand.

"I've looked out the course to get back to Earth, skipper," he stated.

The *Solinox* was tiny below, sun shining silvery on her. Sam removed his gaze from her to Tomlinson.

"What makes you think we could land even if we went back?"

Visible shock crossed the second's face. "You think our charge would remain?"

"Probably. It might even increase. Space-friction on our hull has done what flannel does to ebonite. Free surface electrons have been rubbed off, leaving a surplus of opposite polarity. Another ten months going back would continue the process."

Tomlinson looked pale. "If so, we can't land anywhere!"

The beeping in his ears, Sam did not reply. That problem was one neither he nor the push-button warning devices of the *Greenflax* could answer.

The second-in-command gazed through the port at the vessel far below and licked his lips. "What will happen to them?"

"You know as well as I," Sam said flatly. "Given a fixed potential and decreasing distance, nothing happens until the flashover point is reached—"

He judged that the *Solinox* was approaching a hundred miles distance, making her nine-hundred above Centis. To the unaided eye she was only a glint visible because of the clarity of the near-vacuum

between, and sun on her silver back. Robart with the morse lamp was wasting his time, now, he reflected. Even if Payfold chose to look, he would not see the talking speck of light.

An hour drifted by and Sam felt his inner tension growing to match the force outside. He prowled the ship, never free from the *beep, beep* of the alarm, often returning to gaze through binoculars at their sister vessel. Robart had abandoned signalling or trying to mend the radio circuits, impossible to keep intact under the heavy static charge.

As he walked Sam strove to find some solution, and an idea began to form. They could not make planetfall because of the dissimilarity in electrical potential between ship and Cenis—therefore the voltage must be neutralised. The only possible method was to let the charge leak away at a rate which would cause no damage. Only a half-solution which posed another problem, he thought.

He returned to the control room. Tomlinson was watching their course on the instruments. Orbital speed had been sufficient to maintain altitude, and they would soon be over the planet's night side.

Sparks Robart sat in an unused bucket seat. "How low will the *Solinox* get before lightning strikes her, Skip?" he asked.

Sam's lips twitched. Robart's tone showed he was thinking of his opposite number. Norris had been a good man.

"Depends on the actual voltage," he said heavily.

Probably Waterlow could have computed a figure, but it would have meant little. Static electricity was high voltage. He thought of charged jars. High voltage, but low current. A man could take ten thousand volts on the knuckle from a leyden jar and feel less than he would from a hundred-volt, high-current source. A jar could be discharged by a single strand of cotton touching its inner pole. Infinitely high voltage. Infinitesimally low current . . . The association of ideas came like an inspiration and Sam struck a fist in his palm.

"If we could lower a semi-conductor, and wait until the charge has leaked away!"

Robart looked at him quickly. "A thousand miles of semi-conductor Captain?"

"We wouldn't need that much! The *Solinox* can't be over six hundred above Cenis, now. Furthermore, every bit of leakage is helping neutralise us. A few miles of cord and wire rope, with a metal object on the bottom, would give us an extended point to increase leakage!" He recalled how a charged sphere would discharge itself when a pointed wire was added to it. Electrons flowed from the point into the air, finding their way to the opposite pole. The *Greenflax* was high, but the corona proved she was not in perfect vacuum, and that traffic of electrons was arising between ship and planet.

"I'll look in stores!" Tomlinson stated abruptly.

Sam took up binoculars and looked for the *Solinox*, whose altitude would give them a safe minimum at which to hover. Within fifteen minutes Tomlinson was back..

"There is five thousand yards of thin steel cable, and two thousand yards of half-inch hemp rope." Enthusiasm shone in his eyes. "There's lots of electrical cable and wire in Robart's store. Some is instrument wire winding several thousand yards to the pound."

Robart nodded. "For H.T. generator repairs—"

"And strong enough to wind out first," Tomlinson declared. "The rest can follow. There's a power windlass we can place in the lock."

They put on suits after bringing the equipment out from store, and began with a spool of copper wire. When a hundred yards had been paid out sparking from wire to ship became uncomfortable, and they ran it over a metal pulley at the edge of the step. The cord followed. Winding it out took nearly an hour, and Sam sweated as he helped join it to the first length of steel cable. When he looked out, magnetic boots clamped firm, he saw a long, thin line hanging from the ship's side, outlined by electric fire that glowed its whole length.

When half the cable was out they rested, returning to the inner part of the ship, headpieces removed. The muted *beep, beep* struck Sam's ears as he undid the clamps.

"Think it will work?" Tomlinson looked doubtful.

"It may. Going lower will help, provided we see stratosphere drag doesn't break the thinner stuff low down."

From the control room port Sam searched for Payfold's ship. As he stared, a fourfold lightning flash illuminated a high ridge of mountains small as a toy, joined, and lanced skywards faster than thought. Streamers of vivid flame spread, wavered, and united again. For a fleeting moment the *Solinox* stood clear, focus of the racing discharge, toppling bow down like a sinking ship, then darkness returned, broken by a second smaller flash that struck some metal object, huge but shattered, at a lower altitude.

Sam felt deep regret—if Payfold had only waited . . . He frowned, thoughts suddenly drawn back, and realised the ceaseless warning blight had stopped. He met Tomlinson's eye.

"It'll begin again when we reduce altitude, but will be all right if we descend slowly, waiting for the ship's charge to leak away."

At last planet and ship would be equal, and Cenis no longer at impossible relative potential. There would be honour and glory, for both were inevitable. But not for Payfold, Sam thought nor for himself. *Waterlow* had brought them alive to Cenis . . .

Francis G. Rayer.

More and more scientific equipment is being designed for testing the human body to extremes of pressure, temperature, and supersonic speed—equipment which does not require Man to go into space to use but which simulates the conditions he will undoubtedly meet when he finally tears loose from this planet. The pioneers are the men testing this equipment now — not the first astronauts.

SUPERSONIC ROCKET RAILROADS

By John Newman

Across the barren deserts of the great American South West precision built rail tracks stretch from nowhere to nowhere. Rocket trains ride these rails, reaching over 1,100 miles an hour before slamming to a halt in a few seconds. Ciné cameras, ultra short wave radios, jet fighters and the finest electronic gear in the world control and watch these supersonic runs—for this is science fact of the present.

Travelling so fast that wheels are useless, rocket propelled sleds riding a thin film of air are the latest research equipment in the United States Navy and Air Force performance tests. Men, materials and machines undergo rigorous try-outs before new equipment goes into the aircraft of this supersonic age.

Earthbound as they are, valuable information is being collated on the effects of vicious decelerations and the behaviour of aircraft rockets and guided missiles. Whilst some of this information could be obtained by the use of wind tunnels, tunnels are highly expensive, costing hundreds of thousands of pounds and they are limited in size and speed. Free flight tests, whilst producing ideal conditions for testing, are difficult to monitor and to continue to a desired end, and the ever present risk of crackup renders free-flight tests dangerous and ultimately wasteful. The supersonic rocket railways provide all requirements under good conditions of observation.

In New Mexico, at the Holloman Air Force Base, a bright red sled possesses the euphonious name of Sonic Wind ; but its predecessor was known as Fire Engine Number One, Volunteer Fire Department.

For volunteers ride these rocket sleds. Once the fastest man *on* Earth, Dr. John Paul Stapp has ridden them many times. A Lieutenant Colonel in the U.S.A.F., he once reached 632 m.p.h. in these tests. But this is not speed for speed's sake ; he is after no records. Information is needed on changes in the human physique under enormously increased gravity stresses.

From his 632 m.p.h. he came to a full stop in 1.4 seconds—equivalent to a 40 G deceleration—his weight in this time increasing to from 12 stones to 480 stones. If you ever smash a car into a brick wall at 50 m.p.h. you'll know how he felt.

Ingenious designs enabled him to withstand this force. The sled was constructed in two parts so that the rear rocket section could be slowed down before the front passenger and instrument portion. Near the end of the track water-filled troughs were struck by angled scoops beneath the sled, providing a constant deceleration. By using easily broken plastic barriers to vary the height of water, differing rates of deceleration are obtained.

It was thought that the rate of onset of deceleration, measured in gravities per second, was almost as important as the total number of G's sustained and the time they were felt. Dr. Stapp found a far worse shock was felt with only 38 G's when the rate of onset was 1,300 G's per second than under 46 G's at 500 G's a second onset.

From this study Dr. Stapp came to the conclusion that a pilot should be able to withstand an impact deceleration of 100 G's as long as the rate of onset was below 1,000 G's per second. From here he went on to design the straps and equipment that will allow pilots to survive what could be killing crashes.

A single strap can cut a pilot in half ; a badly fitting helmet can snap his neck. But a shoulder harness will hold the body as it bounces

backwards and forwards between seat and straps—this oscillation was experienced by Dr. Stapp as many as seventeen times during a deceleration with an accompanying equivalent weight loss and gain of 1,500 pounds. At these fierce decelerations even the eyeballs smash forward into the eyelids, causing temporary blindness and beautiful examples of black eyes. Dr. Stapp felt as if his eyes were being drawn out of his head with the same exquisite pain accompanying the extraction of a tooth without anaesthetic.

There is a contrast between the work of Dr. Stapp in trying to eliminate danger from crackups and the work of the U.S. Navy team on their rocket-propelled sled situated at Inyokern in the Mojave Desert of California. The Navy tracks of welded steel are precision set in concrete and run for four-and-a-half miles. Known as the Supersonic Naval Ordnance Research Track, the SNORT (No connection with submariners' Snort masts) the streamlined rocket sled can reach speeds of 2,400 m.p.h.

At these high speeds it is possible to obtain a ground-level view of what happens to aircraft and rockets in flight. Aircraft models and missiles are mounted above the sled and radio-controlled instruments operate various selective tests during a run. It is possible to study the action of airborne cannon, air-to-air rocket missiles and aircraft fire-control systems. Rocket fuses, mounted on a projecting arm, are allowed to collide with targets to determine delay times on fuses before detonation.

The other side of the story is covered when moving aircraft are fired upon with differing weapons to discover just how tough aircraft are at supersonic speeds.

What happens when an aircraft is hit and catches fire at supersonic speed? In free flight the pilot doesn't normally hang around to find out. And the experiment is beset with enormous difficulties if carried out in a wind tunnel. But with SNORT such experiments are possible, without the risk of losing the aircraft with no knowledge of what occurred and without the crushing expense of wind tunnels.

Other organisations will be using the Navy's supersonic rocket track. The Air Force will carry out tests of ejection seats and escape pods, and various types of parachute will be opened at different speeds.

The sled can be accelerated to its speed of 2,400 m.p.h., travel for two-and-a-half seconds and then slow down and stop within the remaining two miles of track. Plans have been made for increasing the length of the track to ten miles and adding a third rail. Speed then obtainable is estimated to be 6,000 m.p.h.—a third of the speed of the artificial satellites.

It will probably be some time before any human—even Dr. Stapp—rides at such velocities. But 'Sierra Sam' or a cousin probably will. Sierra Sam is a prosthetic dummy costing over 4,000 dollars and weighing 190 lbs., with body weights distributed exactly as they are in the human body. He has proved invaluable during the early parts of Dr. Stapp's programme, with 'Oscar Eight-Ball' his predecessor, and the Navy SNORT may well use such dummies in their programme.

One particularly vital application of all this expenditure of money and skill and courage will be in the study of road accidents. Dr. Stapp believes that with proper protection car drivers can live through accidents that today kill, merely because the driver accepts that fact in the instant before collision. It is necessary to build up the thinking attitude that people expect to live through a crash instead of expecting to be killed.

Another rocket sled runs along two miles of track in the Mojave Desert. Here, at the Edwards (formerly Muroc) Air Force Base, Dr. Stapp began his trial runs with the Northrop Aircraft-built 'Gee-Whizz' sled, and the first volunteers rode the rockets. Subsequently, Dr. Stapp moved to Holloman A.F. Base. Now comes news that a land speed record of 1,100 m.p.h. was achieved last year by a rocket-sled built by the Radio Plane Company.

From small projects such as these are coming the vast conglomerations of facts and figures that are needed to make human space flight a reality.

Slowly but surely the work is being done, so that, one day, the Earth-bound rockets of the desert railways will be looked upon as part of Interplanetary History.

John Newman.

With the following story we bring to a conclusion the "Jocko" series by Alan Barclay. A list of the previous titles and issue dates will be found at the end of this current tale—you may have missed one or more of them. We are inclined to prophesy that one of these days you will see this series in complete book form with a lot of additions the author didn't manage to work in.

THE THING IN COMMON

By Alan Barclay

Illustrated by HUTCHINGS

It was twelve years since McCoy last set foot on Earth, and in fact, if the matter were looked into it would probably be discovered that he held the world record for length of absence from the home planet.

Of course he had been back to Moon Base many times in the intervals between operational tours, and had once taken a ship out to Mars for refitting, but this was the first time in all those years that he had felt the full weight of Earth's gravitation.

The tender from the ship had dumped him off on the concrete strip near the entrance to the Admin. Block. McCoy shuffled over to a flower-bed by the window along the wall and stooping down, picked up a handful of soil, squeezed it, let it run through his fingers.

A brief flash of white light and McCoy spun round, or at least made as if to spin round but managed only to move slowly and clumsily. He confronted a smart young man who was aiming a news-camera in his direction.

"Sorry, Major!" the young man smiled. "That was the perfect picture. I just couldn't resist it."



"O.K., O.K." McCoy mumbled, not understanding at all why it should be so.

"My name's Jenkins," the young fellow introduced himself. "From the *British Recorder*. I'd be grateful if you'd have a cup of coffee with me and describe what it feels like to return to Earth after all these years. Can you spare five minutes?"

"I can spare all the time you want," McCoy told him. "I've got all the rest of my life . . . You're sure it's me you're looking for? I ain't famous, or anything . . ."

"You're McCoy," Jenkins laughed, leading the way inside.

He fetched two cups of coffee from the counter and sat down opposite the Major. He knew McCoy was forty-two, but he looked older. He was a small, broad-shouldered man, his hair grey, his face wrinkled and burned nearly black. Only his eyes were young, blue and a little child-like. This was McCoy, the greatest fighter of the age; sixty-eight enemy ships killed; twelve years in space; five tours of ops.; the man who had survived all the hazards of war in space.

"Why did you quit, Major?" Jenkins asked.

"Didn't quit," he grunted. "I was fired. My second eight-year period finished a month ago, so I went to sign on for a third spell, but they wouldn't have me. I told them I was still good enough to knock off perhaps a couple more Jackoes, but they wouldn't listen. I guess they thought they were doing me a good turn."

"You'd rather have stayed?"

"Oh, sure," McCoy said simply. "I'm no good for anything but fighting. They say in this modern age everyone gets an education, but I never got none. Brought up in the outback of Australia . . ."

"But now you're back home, you must have some plans for the future?"

"Plans? Me and the pals I went out with used to make plans . . . We planned to come back together and get speechless drunk, and go after the women. But those pals are all dead long ago, and for years I've sorta expected to get the chop sooner or later like the rest. No, I got no plans. I don't even drink any more, and what woman would look at me? But I got my pension to live on, so I'm O.K."

Jenkins by this time realised that from the point of view of the readers of newspapers this daring warrior of the spaceways, this fearless killer of monstrous alien invaders, was going to be a dead loss. Momentarily he felt a wave of pity for the man, but then reverted to the business of earning a living, which in this case consisted of extracting a few more readable statements from McCoy.

"Well, thank you very much, Major," he said finally, "and the best of luck—have a good time."

McCoy was left humped over his coffee cup. He sat there until the stuff grew too cold to drink, then hoisted himself to his feet and stumbled out through the Admin building into the open.

"How do I get into town, Joe?" he asked the commissionaire.

The latter took in the uniform and medal ribbons and the rocket-flare badge above the breast-pocket.

"Taxi right over there, sir."

In the direction indicated there was an orderly array of sleek white identical-looking helicopters.

"Those? Taxis?" he asked. "I never knew you'd got these. I bet they're dear to hire."

"Certainly they're dear," the man said bitterly. "Everything in this goddam world's dear. But they'll save you lots of time."

"Time's a thing I got plenty of," McCoy said. "I'll go by Underground if it's still running."

It was.

At the United Nations Space Service Institution McCoy changed out of uniform. Then with the help of the Institution he fixed up to rent a two-room flat. He chose the cheapest available, in a rather shabby neighbourhood of north London. He bought himself a bed, a table and chair, a book shelf, and a good colour television. He left his address at the U.N.S.S.I. and moved into his new home.

For several days he did nothing very much except lie on the bed, watch the television or stare at the ceiling lost in thought. His mind dwelt at great length upon the possible outcome of the fantastic war between the Jackoes and the humans—if a solution was at all possible. Very little was known about the invaders, despite the fact that they had appeared on the fringes of the Solar System over thirty years previously. It had been apparent for many years that they intended to stay—it was even thought that they either couldn't return to their home planet because of lack of fuel, or that they no longer had such a place to return to anyway.

But the Jackoes had not been strong enough to over-run the space-fleet of Earth. Nor, for that matter, had Earth been strong enough to either drive them off or annihilate them. The war had therefore deteriorated into a series of long-range actions with neither side gaining much information about the other, and it looked, thought McCoy, as though it would go on for another thirty years.

McCoy sat in a cheap eating-house contemplating a huge plateful of *nasi goreng*, which is a savoury concoction of spaghetti and spiced meat. He was in a state of considerable exhaustion, for he had walked round the neighbourhood a distance of fully two miles. After twelve years away from Earth gravity, during which he and his friends had successfully dodged every attempt by the medics to induce them to take exercise, this was roughly equivalent to swimming the English Channel both ways. He was considering the problem presented by the food in front of him. He was hungry enough to eat a whale, but he knew he could not accommodate all this food in a stomach which had shrunk with years of space diet.

"Anything wrong with the grub?" a voice asked.

He looked round and saw the proprietor standing beside him. He was a tall, smiling, ebony-coloured African.

"Grub's O.K." McCoy assured him. "The trouble's with me . . . I'm too done-in to lift my fork."

"You're Major McCoy, ain't you?" the man asked, a little hesitatingly. "I saw your picture in the paper yesterday. You been in here three - four times."

"I guess that's me," McCoy admitted.

"My boy's out there, where you've been."

McCoy glanced up at the man again. He guessed there was something he wanted to talk about.

"Got time to sit down a while?" he asked.

The man pulled up a chair. "The name's Jones," he introduced himself. "I own this dump . . . I got my boy out where you came from, Major. Just commissioned."

"Uh-huh," McCoy grunted.

"What d'you reckon his chances are?"

"Chance of what?"

"Chance of coming through O.K., I mean."

"If he lasts through his first two - three engagements he'll be O.K. Take me, now. I been out so long they got sick of me and sent me home."

This, of course, was a completely false statement of the case. The average operational life of a pilot was six months, or ten sorties, or nine kills, whichever you prefer. McCoy was merely a living illustration of the laws of probability, which say that the most unlikely event may occasionally happen.

"When d'you think it'll end?" Jones asked.

"Don't see that it can ever end," McCoy grunted.

"They might clear out. I mean—if we make it tough for them they might go back where they came from, or move on somewhere else," Jones proposed.

"Maybe," McCoy agreed. "Your guess is as good as mine, but mine is they can't, because they've no fuel."

"Suppose we made a tremendous all-out effort to clean them up?"

"O.K. So we could, but do you realise how tremendous? Suppose you want to get something, say a man, just one little man out in position to take a knock at the Jackoes. First you've gotta hoist him up to the moon, see? Then train him, and it's a complicated training. Then you build him a ship. That isn't so costly now we've got factories on the moon, but still you've gotta have people out there to run the factories. Then you must send this man out maybe four hundred million miles, with his ship, and lots of expensive fuel and guns and oxygen and radar and stuff. I guess it must take a quarter million credits to put a trained man with a ship and guns where he can have

a crack at the Jackoes. And what happens then ? He finds the Jackoes sitting there on their fannies waiting for him, and the first time he makes one little mistake—Blooeey ! One man and a quarter of a million gone."

McCoy paused for a moment. "Sure, I guess we could finish them if humanity made an all-out effort like every man, woman and child working wholetime on armament, and every fit man signing on for service. But I see no sign of that happening. Tell me this, brother. How many folks do you know who're personally mixed in with this thing, except you and me ?"

"I guess not many," Jones admitted. "But it's always in the papers. They're always blowing their tops about it in U.N.O."

"Sure—it's good frothy material for making conversation. But the number of folks out there actually pressing triggers is mighty few, and the space around them is big—real big—big and black and lonely."

Jones nodded his head slowly a number of times. "I see, Major. I see . . . And what plans you got for your future, Major ?"

"None, I guess. Finding myself sacked and sent back down here happened so unexpected I hadn't time to make plans."

McCoy walked around the town a lot. At first walking was a tremendous effort to him, but he continued doggedly, yet cautiously, reminding himself that he was not a young man, and little by little extending his beat.

In this way he saw a lot of the town. The town was newer than it used to be ; many of the twentieth century structures were gone, replaced by towering white edifices in plastic concrete. One of the most curious changes was the scarcity of private motor vehicles, which twelve years ago had jammed the city streets so that every motorist spent a large proportion of his life in a slow-moving stream of traffic. The public had adapted itself to the use of helicopter transport. Yes, the town was newer, cleaner, well-managed. The people were well-dressed, well fed, pleased with themselves and with life. Too pleased.

McCoy began to sense something about the place and the people that he did not like. He fumbled round in his mind to find what this might be. True, the contrast between all this luxury—well-sprung vehicles, flowers, gardens, clean and airy apartments, with the stark simplicity of the bare moisture-beaded metal walls, the ducts and pipes and valves and raw welded joints of accommodation in space was complete, but this difference was not the cause of his dislike ; it was something in the manner and appearance of the people themselves. Too bustling, too smug, too self-satisfied.

His thoughts slipped away from this subject to a contemplation of his aching leg-muscles.

How McCoy would employ himself for the rest of his life, nobody knew, least of all McCoy himself.

Three days after the appearance of his photograph—with appropriate captions—in the newspaper, McCoy received a letter. As he had no relatives or close friends in the world he turned it over and over before opening it, with a mingled feeling of curiosity and suspicion. The envelope was of stiff quality material. On the flap were the initials W-T Mfg. Co.

The letter expressed its happiness in the fact that McCoy had returned to the comforts of civilian life at the end of a distinguished military career, and wished him long life and happiness. It added in a small final paragraph that the organisation the undersigned had the honour to represent was anxious to avail itself of his wide experience and would be very glad if he could call at its London Headquarters office at some time convenient to himself. The organisation had in mind a business proposition which might possibly interest him. It was signed "*For Whalen-Trugood Mfg. Co., indecipherable signature—Secretary.*"

McCoy did not know the Whalen-Trugood Manufacturing Company, he did not know what they manufactured, and could not believe that they had any proposition to make that would be profitable to either party. But his time was his own. Two days after the receipt of the letter he visited their office.

He was received by an urbane young gentleman who said he was the Company's London secretary.

"Our organisation has its factory sites in Wales and in southern Scotland, as no doubt you know, Major," he explained.

"I didn't," McCoy told him. "And I still don't know what you want with a fellow like me."

The secretary extended a box of cigarettes. McCoy shook his head.

"You don't know what we manufacture?" the man asked.

"Yesterday, after I got the letter, somebody told me you made gas-turbines for helicopters, and a lot of engineering stuff of that kind."

"We do that, of course," the other admitted, "but in addition we produce guns, ranging equipment and loading mechanisms for the fighter ships you've been using. Our armament works are out on the Moon, naturally, but we do basic development work right here. And that's where you come in, Major. We believe that criticisms and suggestions from a man with your unique combat experience would be invaluable, and my directors have authorised me to offer you a very

reasonable salary to join our staff." He mentioned the salary. It was so reasonable that McCoy wondered if he had heard correctly.

"I suppose it's a job I could do," he admitted cautiously. "I've cursed manufacturers often enough. But your stuff must be tried out in no-gravity conditions to find its weak spots."

"Yes, of course. We have a team which carries out space-testing, but we want someone who can spot the flaws right here at home."

"Why begin now?" McCoy asked suspiciously. "You've got along the way you are for quite a few years now."

"For two reasons," the secretary smiled. "It's only now that someone like you has become available. Secondly, you must surely see how the wind is blowing at present."

"I dunno as I have," McCoy confessed. "How is it blowing?"

"Ever since that young officer raided the Jacko nest and brought back pictures of their fleet of mother ships—what was his name?"

"Jason," McCoy said. "And he didn't bring them back. He radioed them back. He was killed."

"Of course," the other agreed. "Well, now we know about the Jacko fleet of big ships hanging around outside it's clear there must be a flat-out drive to destroy the lot of them. Don't you agree, Major?"

"It's a possibility," McCoy admitted cautiously.

"It's inevitable," the other assured him enthusiastically. "We anticipate a major attack project. We estimate two years of preparatory work. Factories here and on the Moon humming all the time. Ships, motors, guns, equipment flowing off the production lines. Surely you agree?"

"It's possible," McCoy repeated. "Suppose the attack fails?"

"Well then . . ." the secretary shrugged, "we try again—harder than ever. But it's inevitable that such an attack should be planned. Already people are beginning to demand it. Soon there will be a popular outcry."

"I ain't heard any outcry yet," McCoy said. "In fact, seems to me precious few people know what's going on out there in space."

"That'll change," the young man assured him. "We'll have publicity, build-up speeches, letters to M.P.'s, questions in Parliament and in U.N. It'll come . . . It's got to come . . . And then, the grand all-out attack. I can just see it . . ." His eyes sparkled.

"You plan to go along with it?" McCoy asked with complete innocence.

"Why no," the other said calmly. "I do a useful job here, you know. But what have you to say to our proposition?"

"I'll think it over for a week," McCoy told him. "I dunno how much use I can be to you. When I was a young fella I was too busy

to get education. I guess I'm probably the most completely uneducated man alive. Even if I saw something about your guns that needed altering, I dunno that I could put it on paper. But I'll give you an answer in a week."

If McCoy had no education, at least he had a more than ordinary amount of common-sense. The Whalen-Trugood Manufacturing Company were in the arms production business for the purpose of making dividends, and it was clear that they expected to make bigger dividends if large-scale assaults on the Jacko mother-fleet were developed. He knew, however, that it was quite customary for human beings to do things for money; he himself had been in the space-war because fighting was about the only thing he could do well, so he did not despise the firm on that account. He was attracted by this opportunity of doing useful work and earning a good salary instead of trying to rub along on his pension.

In the next week McCoy paid attention to what was going on around him. The idea of an all-out attack was gaining popularity. M.P.'s in many countries were demanding it. Radio discussions, editorials and newspaper columns were being devoted to it. Experts—real and imitation—on space problems and space warfare were being given a chance to say their piece in the periodicals.

McCoy listened to all the talks and laboriously read all the articles. He was vaguely distressed by the amount of ignorance and misinformation displayed. Nobody seemed to grasp the immense difficulties involved in attacking an objective five hundred million miles away in space, an objective whose defenders were right there waiting, armed, experienced, and fanatically courageous.

One person did not share the awakening public enthusiasm for a large-scale attack; this was Arthur Jones, the restaurant-keeper, whose son was somewhere out in space at this moment.

"You reckon one big attack like they're talking about will finish the war?" Jones asked McCoy. "Then the boys will get back home?"

"You don't oughter think I know anything special," McCoy pointed out. "I don't know anything about strategy and tactics. All I got is instinct, like a lotta other dumb animals, and it says these Jackoes will fight and stay fighting to the last man just because there's nothing else for them to do and nowhere else for them to go."

After a week of thinking it over McCoy agreed to take the job with Whalen-Trugood. The work required of him was by no means arduous and there was no requirement to conform to regular office hours. He was expected to keep in touch with the development of new weapons and devices and to be in attendance at proofing trials and progress meetings, and to report his opinion. He discovered that

these latter might be spoken into a dictograph, so he was spared the enormous labour of putting his opinions on paper. A private helicopter was at his disposal for visits to the manufacturing and proving centres of the firm in Wales and Scotland.

His appointment received a surprising amount of publicity—surprising that is, to McCoy, who did not know that it had been engineered by the firm's public-relations officer. Once again his photograph appeared in the press, a much better one this time, in which he wore a brooding and deadly look. The picture was accompanied by a skilful account of McCoy's career, with his most famous adventure, the hand-to-hand battle with the Jacko, told once more in graphic detail*. Major McCoy, the write-up concluded, had agreed to accept the position of combat adviser to the Whalen-Trugood Manufacturing group.

Instead of being obliged to rub along on an officer's pension McCoy found himself enjoying a good salary. In addition, he had no fixed hours of work and the use of a helicopter. For reasons he did not understand—the firm's public-relations officer worked unobtrusively as well as efficiently—he found his name appearing occasionally in newspapers and in broadcast news items, and from time to time he received invitations to dinner.

The percentage of humanity directly involved in the space-war was very small, and after the first years it had jogged along without attracting a great deal of public interest. Now, however, it had moved into the front pages. There was a growing enthusiasm in favour of a massive final attack. Details of the annual cost of carrying on the present defensive operations were released to the public, and aroused great indignation.

As a consequence of this growing interest—and possibly also as a result of the relations officer's underground activities—McCoy was invited to take part in a television discussion. The programme-leader introduced him with a considerable build-up. This was McCoy the ace Jacko-killer, the only human being who had met the enemy face to face.

McCoy, however, had the habit of remaining silent until spoken to, so that during the first part of the discussion the other speakers made the running, but presently the Chairman turned to McCoy and said :

"We haven't heard your opinion yet, Major. I take it that you more than anyone else, must be in favour of a large-scale operation. What form do you think it should take?"

McCoy answered this simply, as he did everything.

* See "The Real McCoy"—New Worlds No. 34, April 1955

"I bin used to doing the fighting as and when required and haven't thought much about tactics and strategy, so my opinion maybe isn't important, but I believe the Jackoes can't be driven out of our corner of space because they haven't got enough fuel left in their big ships, and nowhere to go if they had any. If that's true, you gotta kill them all and that ain't easy. The score so far works out at one of our men killed for every Jacko, not including the casual space accidents. How many Jackoes are there? Nobody knows, but we might say four hundred thousand and each one will fight like hell. Right? So it'll cost us four hundred thousand lives to kill four hundred thousand Jackoes. Plus all the training accidents, all the ships lost in space, all the accidental blow-ups. Put it at a round million lives. Then there's the finance angle. I've heard it costs half a million credits to put one man out in space where he can knock the enemy. That makes five hundred thousand million credits, and all that gives us no more than even chances of knocking them."

McCoy stopped and looked round guiltily. He felt that he had talked a great deal too much.

"So in effect you believe we can never knock out the Jackoes, Major?"

"I didn't say so. I reckon humanity can do any mortal thing it sets its mind to. I've said I think they can't be driven off, so we gotta kill them all. Then I just estimated the cost . . . I make it out to quite a bit more than what you've bin calling a large-scale attack."

One of the other speakers seized upon McCoy's words.

"I think Major McCoy has made a very important contribution to the discussion. Indeed, I think this is the first time the real issue has been put squarely before us. If the enemy are unable to leave our system due to lack of fuel, then we must destroy them. Not drive them off. Not teach them a lesson. Kill them all. The effort to do so is incalculable. They will be on the defensive. We must carry the fight into their territory. They can sit and wait while we come at them, across five hundred million miles of space. And they are suicidally courageous."

"Is there any alternative?"

"We can let things run the way they are now," McCoy said.

"An ever-lasting drain on our finances and man-power?"

"A running sore—the phrase is bound to crop up sooner or later," somebody added.

Next day McCoy was asked to visit the London secretary of Whalen-Trugood. That amiable and polished young man waved him into a chair and offered him a cigarette.

"You had a good innings on the television last night, Major," he began, blowing cigarette smoke gently towards the ceiling.

"Oh, I dunno," McCoy mumbled. "I ain't much of a speaker. Don't know grammar and such-like. I guess I sounded like a real hick by the side of these University blokes."

"You're entirely mistaken about that, Major. I've never heard anything more forceful, more effective, more convincing. You practically stole the show."

"Well—I only spoke the way I thought," McCoy pointed out.

"Exactly ; that's why it was convincing. But of course . . ." the man continued with a smile, "your remarks could hardly be described as good for business."

"Why?" McCoy asked, bewildered. "I just answered a couple questions."

"I know. But you forget that Whalen-Trugood are in the armament business, and that any discouragement of large-scale operations is bad for dividends. Think it over, Major. Next time you speak in public, give out with some blood-and-thunder stuff about sweeping the alien monsters from the sky. Work in some anecdote about unarmed and crippled comrades being ruthlessly destroyed. Think it over, Major."

Public interest in the Jacko problem increased. McCoy had started a new line of discussion. People began to try out the answers to the questions he had raised. A large-scale attack—to achieve what? To kill them all? To wipe out every last Jacko? If so, how much was it going to cost in lives and money?

McCoy did another television programme. This time he appeared as principal speaker and was questioned by a famous interviewer.

"We understand, Major," this man began, "that you oppose this demand for a large-scale attack. Is that so?"

"Not me," McCoy objected. "I ain't opposed to nothing. Don't imagine because I've been out in space and punctured a few Jackoes that I've set myself up as a strategist. Killing Jackoes just makes a man more expert at killing Jackoes ; that and nothin' more. I don't object to nothing. I just ask—what do folks mean by a large-scale attack? What do they hope to get from it? Are they ready to pay the cost?"

"Some people are beginning to see that it must mean the killing of every single one of them. What d'you think of that?"

It was then that McCoy made one of his most famous remarks.

"It makes me think of men in space-suits wading into whole ship-loads of critters—females and kiddies of some sort—with axes and sub-machine guns." He said it quite casually, without any appearance of disapproval.

The questioner shuddered. "Can you suggest any alternative, Major?"

"There's two I can think of," McCoy said. "One is to let things stay the way they are. After all, men doing the fighting are volunteers like me, who do it for fun and money. You might say this war is the means for a lot of restless quarrelsome guys to blow off steam. The other way is to try and find out what the Jackoes want and give it to them. If it's fuel shortage that keeps them hanging around our backyard, let's give them some and tell them to blow their jets to some other corner of the galaxy."

"Your attitude to the Jackoes is a little unexpected, Major," the speaker went on. "You've killed more of them than any man and you've seen a lot of your friends killed, but you appear to hate them less than anyone of us."

McCoy scratched his head. "I guess I don't at that. Got a sorta fellow feeling for them . . ." An expression of puzzlement appeared on his craggy wrinkled brown face. "I suppose I oughter hate them, but I don't."

The reporter who interviewed McCoy on his return to London had listed him as a dead loss from the news-interest point of view. How wrong he was! "I suppose it means wading in with axes and sub-machine guns to finish off the females and the kiddies," was quoted round the world and out to Mars and Venus. It was a sort of verbal earth-quake. In the next few months it did a lot to influence and change public opinion. People began to see the aliens not as monsters, but as rational creatures who might have an understandable point of view.

McCoy had said something else; for the first time the word *Negotiate* had been used. "McCoy says negotiate." The word made headlines the next morning. It also brought a crowd of newspaper reporters—fifteen in all—round to his flat. McCoy, puzzled by the interest he had aroused, made coffee for them.

In after years it became customary for enthusiasts to acclaim McCoy as the man who by his own solitary efforts brought about a solution to the problem of the aliens. Some maintained that all his actions and all his speeches were in accordance with a conscious intention to bring about this end. A few even went so far as to assert that he resigned from the Space Service in order to be free to carry out a preconceived plan.

This, of course, was mere fantasy. McCoy was a sort of human trigger; his words set fire to a lot of material that had been accumu-



lating in other people's minds. Being an honest simple uneducated man made him all the more effective a trigger.

While he was in the middle of passing round cups of coffee to the crowd of reporters the phone rang.

It was the suave young gentleman who was London Secretary to Whalen-Trugood, Ltd., and never could circumstances have been arranged more unfortunately from his point of view. In the first place, McCoy's flat did not have one of the new visi-phones, so the speaker did not discover that McCoy had visitors. In addition, the phone was very loud and clear. Finally, the reporters, being reporters, had no scruples about listening in.

The young gentleman was not being particularly suave this morning.

"Look here, McCoy," he began in tones which he had found very effective with underlings. "I gave you a very broad hint last week concerning those radio talks of yours. At least it seemed broad enough to be understood by any person of normal intelligence. However, since you're apparently too dumb to take a hint, I'll give it to you straight. Whalen-Trugood are in the armament business to make money, and it isn't our job to participate in peace talks. Keep that big mouth of yours shut on words like conciliation and negotiation. Any more of this sort of nonsense, and pretty soon you'll find yourself trying once more to live on a service pension."

McCoy held the telephone in one hand and scratched his head with the other. There was a deathly silence in the room. The listening reporters exchanged looks of pure joy.

"I don't understand this," he mumbled into the mouth-piece. "I thought you employed me on account of my combat experience."

"Don't be more of a fool than you can help, McCoy," the voice said clearly. "We don't need dumb trigger-men like you to show us how to do our job. You're with us because you're a public hero. That's all."

"Well, now I!" McCoy said simply. "I guess I have been dumb after all. The only thing I can do is resign."

He said this without any show of animosity. The voice at the other end of the phone gave evidence of being considerably shaken. It began to produce soothing and conciliatory noises.

"I'll write my resignation on a bit of paper and send it to you this afternoon," McCoy told him briefly.

He hung up the phone and turned away from it, scratching his head.

"Well boys, it was a nice job while it lasted," he grinned.

One of the reporters gave an Indian war-whoop and dashed for the door. The others waited, but McCoy merely asked :

"You all got enough coffee, boys?"

Although the remainder of his visitors did not exactly run from the flat—one or two even stopped long enough to empty their coffee-cups—the place was empty within five minutes.

The news hit the headlines and the news broadcasts that evening. 'McCoy sacked by Whalen-Trugood'; 'Armament firm dismisses Space Hero.' Beneath the headlines were carefully worded accounts of the incident. A precis of McCoy's television discussion the previous evening, an account of the telephone conversation, and a factual statement of Whalen-Trugood's manufacturing activities, including a report on their share capital and dividends. No conclusions were drawn ;

nothing libellous was uttered. Readers and listeners were left to draw their own conclusions, and draw them they did.

Of course, Whalen-Trugood tried to talk themselves out of the trouble they had got into. The London Secretary, much chastened, visited McCoy and tried to demonstrate the dismissal—or resignation—had never occurred, and that the whole matter was a most lamentable misunderstanding. He had with him a statement for publication explaining that there had been no disagreement, no resignation, and that there had never been any attempt to restrict or control McCoy's utterances. One of the things the young man never understood was why he did not succeed in getting McCoy's signature to that document.

"Tell you what, son," McCoy told him, "what you should do is sign on for three years space service. You'll find it tough, but it'll do you good. Just at present you're scared—scared of losing your job, or scared of having to make do with a second-hand heli instead of that white shiny thing you've got—scared that luscious piece of goods you've married will up and leave you if you don't give her enough money to spend. When you get back you'll see things different."

This reply was so unexpected, it penetrated so deeply into the young man's mind, that he grew silent. He looked at McCoy for a long moment. McCoy was lying quite still on the bed. He was perfectly calm. He had just lost a comfortable job at an excellent salary and was now facing life once more on a meagre pension. He had made this change without hesitation, without animosity, without abuse or grumbling.

The secretary picked up his hat and left the flat.

McCoy was now a public figure. The story of his life was serialised in several of the newspapers. He himself was constantly interviewed, and his squat figure, craggy face and mumbling diffident way of talking had become familiar to television viewers the whole world over. There was nothing rare or unusual about McCoy, of course—unless you would consider his child-like honesty a rarity—except his long experience of space and of Jacko warfare. He was simply a trigger-man, who put into words what lay just beneath the surface of ordinary people's minds.

In the next few weeks he added to his reputation by a simple piece of prophesy. A speaker in a television interview asked him:

"Yes, McCoy. This is all very well. I agree heartily with your proposals. Your classic phrase 'wading into the females and kiddies with axes and sub-machine guns' brought home to us all the real meaning of 'wiping the monsters out.' I agree the Jackoes are probably stuck here in our system because of lack of fuel, in which case they cannot

quit, and our present type of frontier war might continue for ever. I agree that we could give them fuel to set them on their way. But the big objection to all this is that they never attempt to deal with us. You know better than anyone that they shoot on sight. They commit suicide rather than surrender. They destroy one another if need be rather than fall into our hands. In the whole history of this war, we have not so much as had a single Jacko corpse. We don't know what they look like."

"We got some pieces of dead Jacko," McCoy told him. "The biologists reckon they look a bit like a octopus—round black body and eight tentacles. Also it's been worked out from the bits of apparatus floating around when one of their ships is destroyed, that they're oxygen breathers same as us."

"Quite so . . . Quite so . . . But that's not my point. They've made no attempt to negotiate with us."

"That's because they think we're alien monsters," McCoy told him.

The questioner laughed. "True . . . You've made a point there. But, I must repeat—they won't negotiate. They won't deal with us. How can we proceed?"

"I'll tell you what," McCoy replied. "To each other, we've been a couple of alien monsters. After all these years we've bashed at each other, we humans have finally got to the point of wondering whether this must go on for ever. Now it seems to me the Jackoes haven't made any progress either. Let's say they've arrived in our corner of the universe with the idea of colonising our planets—well, they haven't made even a beginning yet. It's true they've knocked us hard, but we've knocked them just as hard in return. Unless they've another weapon up their sleeves they must know by now they can't subdue us. And we've got unlimited resources of fuel and manpower from three planets."

"This line of argument seems to be leading in an interesting direction—what conclusion do you draw from all this?"

"Not a conclusion," McCoy objected, "just a guess—I guess we'll have the Jackoes tryin' to make a deal with us quite soon."

After occupying the headlines and the television screens in this fashion for a little while, McCoy might well have faded into obscurity again. He himself certainly expected nothing else, and after leaving Whalen-Trugood he settled down in his little flat where he meant to spend his time 'getting himself a little education.'

But he was not left in obscurity for long. Five days after his latest broadcast a certain Mr. Granville sent him an invitation to dinner. He had no idea who Mr. Granville was, but he accepted nevertheless. He hoped this might mean another job.

Mr. Granville was a Negro. He had a magnificent flat, lavishly furnished and his wife was an exceedingly beautiful woman. He himself was one of the handsomest men McCoy had ever seen. In addition to this—or perhaps despite all this—McCoy liked him at once. The man gave out an impression of enthusiastic honesty.

"I'm one of the secretaries to the United Nations Union," Granville explained as he welcomed McCoy. "That is to say, I'm a permanent paid employee—a civil servant if you like. I am also," he smiled apologetically, "an exceedingly wealthy man. I mention this in case you should wonder how I manage to live as I do on a U.N. salary. My Department handles some aspects of the space war problem, so you will understand I have been keenly interested in your recent doings. Having said this much to explain my invitation to you, let's have dinner, shall we?"

Dinner was served on the balcony of the flat overlooking the city some thousand feet below. It was the sort of dinner McCoy had not even dreamed possible. Granville and his wife were adept at putting all sorts of people at ease, and McCoy, a simple soul without any sort of inferiority complexes, enjoyed it immensely, and was induced by Granville to talk freely about the space war and the problem of finding a solution to it.

"Now, Mr. McCoy," Granville said at length, "let me warn you fairly that I mean to ask you presently to undertake an exceedingly dangerous, almost suicidal job. Something important has happened out on Mars, and I think you're the man to handle it. You see," he smiled charmingly, "I know a great deal about you. I've read all the official reports on you, everything that's been written about you in the papers, and heard all your broadcast talks."

"Well?" McCoy asked.

"Something happened out on Mars—something important," Granville repeated. "A Jacko ship has been found standing in the desert. You'd better read the papers on it before I say any more." He passed a cardboard folder across the table to McCoy. It held a few photographs and a mass of papers, mostly typescripts of radio messages.

McCoy ploughed his way through the complete account of the Hot Potato incident, right up to the final accidental blowing-up of the Jacko ship.

"The fellow who made that blunder sure got his fingers rapped," he finally commented. "But what's it got to do with me? This story's ended—about as completely ended as any story could be."

"Not quite, Mr. McCoy," Granville told him earnestly. "The ship's crew have never been found."

"Of course," McCoy agreed, "they must still be roaming around somewhere out on Mars."

"Not roaming around exactly, but they're on Mars all right. We've been looking for them since we first spotted the ship but haven't found any trace of them till four days ago. I got a radio message yesterday. Those Jackoes took a chance on sending out a radio signal. It was quite short, but it had the characteristic Jacko modulation. Two of our people spotted it and got a bearing. They're hiding in the desert about twenty miles south of where the ship was."

"Still hiding?" McCoy asked. "Not destroyed, or blown themselves up? Don't tell me they've let themselves be captured."

"They're still there, unmolested, alive so far as we know."

"I get it," McCoy nodded, "or to be truthful, I don't get it yet, but at least I see you've got a problem on your hands. Tell me more."

"What interests me above all is their reason for coming to Mars in the first place," Granville continued. "You can imagine we've spent a lot of time chewing that subject over. It can't be ordinary spying, for the Jackoes can't mingle with humans, and so far as we know they can't understand human speech. However, I'll not waste time describing our speculations on the subject, for we finally got a clue concerning their purpose."

"You noticed in the reports that Captain Nicholls managed to take some photographs inside the Jacko ship by means of his remote control device—very ingenious, don't you think? One of these pictures, inside the control compartment of the ship shows an acceleration couch with a space-suit lying stretched out upon it." Granville paused to let this information sink in.

"Meaning?" McCoy asked.

"No-one knows better than you that the Jackoes are spherical in shape. They don't need acceleration couches of human dimensions, and they certainly could never use human space-suits. But they've brought these two items along in their ship—probably picked them up among the wreckage of one of our vessels. The picture shows the suit's been repaired. What d'you deduce from that?"

"Maybe they've brought some human along with them—a captive or a renegade. In all the years of fighting I suppose it's possible they got one or two of us alive. But more likely they've come to Mars to pick up a specimen or two and carry them back alive-o."

"That's what I think. That's what several people think," Granthey admitted. "Thus we come to question number two—why do that want a live human?"

"To carve their initials on him with a hot poker," McCoy submitted cheerfully. "Or maybe they want him to play the leading part in some religious sacrifice. Maybe some important Jacko lady means to put a collar round his neck and keep him as a pet, or perhaps they've acquired an appetite for broiled man."

Granville smiled briefly. McCoy reckoned he was one of those earnest reformer types with very little sense of humour.

"Something of that sort is possible," he admitted. "But don't you think it more likely that your own prophesy is coming true?"

"What prophesy is that?" McCoy asked. "I've talked such a lot lately."

"That the Jackoes have got around to trying to negotiate."

"I reckon that's possible," McCoy admitted.

"If we accept that theory," Granville continued, "what move should we make in the circumstances?"

"If you believe they should be wiped out . . ." McCoy began.

"But I don't. I am most seriously and earnestly in favour of making peaceable contact," Granville told him passionately.

"In that case let us show ourselves willing too. Let's at least find out what sort of proposition they make."

"I agree," Granville said, then leaning forward, he continued earnestly. "Mr. McCoy are you willing to walk out into the desert where these Jackoes are hiding and let them take you prisoner in the hope that this will lead to discussions between us and them?"

McCoy laughed. "Willing? Of course not. Suppose you're wrong about this whole thing? Then at best they fry me as soon as I come within range. At worst they perform a spot of vivisection to find out how us humans tick. Anyway, why pick on me? Why not send someone important, like the President of the U.N., or some senator? Why not go yourself, Mr. Granville?"

"I've considered going," the other assured him gravely, "but I think you are the better choice. Although I'm a United Nations official I'm quite unknown, whereas you've become a famous and respected figure. If you succeed—if the Jackoes send you back with proposals for negotiation, the whole of humanity will listen. Whether you believe it or not, McCoy, you're the great hero of our day."

McCoy said nothing. His expression did not even show any change in emotion.

"In addition to this," Granville continued, "you know more about the Jackoes and more about space-conditions than anyone alive. Finally—this is my most powerful argument—you'll be surprised to know that you're probably known and respected by the Jackoes as well."

"Now, Mr. Granville," McCoy protested, "a few Jackoes have seen the outside of my space-can, but even my ugly mug can't be recognised through half an inch of metal."

"You met at least one of them face to face," Granville reminded him. "You had a hand-to-hand fight with a Jacko on an asteroid. Remember?"

"I'm never likely to forget," McCoy agreed. "But me and the Jacko were both wearing space-suits. We were just a couple of unidentifiable blokes, belting at each other with axes."

"But you spared his life."

"I remember that too," McCoy nodded. "He was a courageous little bloke and I'd had enough killing for one day. All I got for that was a reprimand. 'Your job is killing Jackoes, McCoy,' says the C.O., 'not playing knight of the spaceways.'"

"And you gave this Jacko a message," Granville challenged.

"Not me," McCoy denied. "I don't speak the Jacko lingo very well, especially not when wearing a helmet."

"You gave him a drawing—a space-suited human mounted astride his ship, slashing at the Jackoes with an axe—a message of defiance."

"Sure, I did. I remember that," McCoy admitted, puzzled. "But I never reported that part of the story."

Dramatically Granville handed McCoy a photograph. "This your handiwork?"

McCoy studied it in amazement. "It seems to be a photograph of my sketch—pretty blurred, but it's mine all right. That scrawl's my signature."

"So I guessed right," Granville concluded. "When I saw this photograph, I recalled your talent for sketching, and deduced this was yours. That photograph was taken inside the Jacko ship. The original was stuck on the wall."

"This beats me," McCoy exclaimed, staring at the picture. "Of course, this is a copy of a copy—and a rough one at that—but it's mine all right."

"I can suggest an explanation," Granville told him. "Let's agree the Jackoes want to make contact—right? So this ship's crew, and probably others as well, carry copies of this sketch around. You're the only human who's ever shown them mercy, so they hope to make contact with you, or with someone of your tribe; some human who might keep his finger off the trigger long enough to let them wave this picture. I guess they think you're a great leader or chieftain. Perhaps they hope that any human being will recognise this as your handiwork."

"No," McCoy shook his head. "As a scheme it's just too flimsy. I agree that this theory about the Jackoes wanting to chat with us is worth takin' a gamble on, but despite this photograph, I can't believe they're looking for me. You should put someone more important on the job. Say, Mr. Granville! Go yourself and I'll come along to carry your bag."

"Mr. McCoy," Granville told him earnestly, "you know many powerful interests are campaigning for an all-out drive against the Jackoes—the inhuman monsters from space.' Suppose I went, and suppose I returned safely. The news would be a mere nine days' wonder. Then whispers would begin. 'Did he really visit the Jackoes? Did he really talk to their chiefs? If he did, so what?' But if McCoy returned from a visit to the Jacko mother-fleet, well then, no matter what the politicians and the underworld of business might say, the general mass of humanity will listen and believe you."

"Well . . ." McCoy hesitated, "suppose I go? Suppose they don't boil me in oil? Suppose I manage to exchange ideas with them, though the only way I can think to do that is by drawing on bits of paper—what shall I say? Tell them to get to hell out of our solar system, or sell them fissionable material for fuel at so much an ounce to help them on their way?"

"My dear fellow," Granville assured him, "at this stage you tell them nothing. You'll function as a contact man, an honest go-between, that's all. Already you have the confidence of humanity. You must win the confidence of the Jackoes. Then, when we know what they want, we'll talk trade."

"Well . . ." McCoy said, scratching his head.

"McCoy Blasts off for Mars" the headlines shouted two days later. Underneath the headlines, however, there was very little solid information, for McCoy had got aboard the *Martian Maid* unobserved by reporters, who were therefore obliged to fill in with vague suggestions that he was being employed on an urgent U.N. mission relating to space-war problems.

"Afternoon, sir," McCoy said sheepishly. Facing him was a Colonel of Martian Land Forces, and McCoy had to use considerable self-restraint to keep himself from saluting, even though he was in civilian dress.

"Afternoon, McCoy," the Colonel replied gruffly. "Well . . . we know this bunch of Jackoes are dug in among some low cliffs about twenty miles from here. The area's been surrounded since they were first spotted and according to orders nobody's gone near them."

"Sure they're still alive?" McCoy asked.

"They were a week ago. We heard them send out a mass of radio signals. It went on a tight beam, but being so near we got the backlash. That's our latest news."

"I guess you know the orders, Colonel—if a Jacko ship comes down, leave it alone, and give it a reasonable time to take off again. After it's gone, or if it doesn't come within the stated time, or if it comes and stops here more than five days, then you move in and take over. Agreed?"

"That's orders," the Colonel nodded. "And I'm to provide a vehicle to drive you out to their hideout. When do you want it?"

"Might as well have it at once," McCoy told him.

The Colonel, who was a very tall man, looked down at McCoy's tough leathery features.

"Anything I can do for you, Major?" he asked. "D'you want to take a hand gun with you?"

"No thanks," McCoy told him.

"Well," the Colonel said awkwardly, "best of luck, McCoy."

The sand-truck ground to a halt about a mile from the reddish cliffs.

"Terminus," the driver said. "They're supposed to be somewhere over there. Anything I can do for you?"

"No thanks," McCoy said. He opened the door and threw out a haversack crammed with food concentrates, then more carefully lifted down a space-suit, an air purifier, and a considerable number of oxygen bottles.

"You O.K.?" the driver asked, looking down at him from the cabin.

"O.K." McCoy told him, waving a hand.

The truck rolled backward, spun round on its tracks, leaving a wide scuffle in the wind-blown sand, and trundled back. McCoy piled his gear carefully together, fastened his Martian-atmosphere breathing helmet and switched on the little air-pump. Then he sat down to wait. He hoped the Jackoes would come before dark, for it was very cold on Mars after sundown.

Four of them appeared almost simultaneously. There was one right ahead of him, one on each side and—yes—he turned around, and there was a fourth in his rear.

In the distance they were nothing more than four round objects, scuttling over the ground on a number of short legs, but as they drew near he saw that each one was a shiny metal ball, with a small transparent window in it, and having a number of exterior attachments. As far as he could remember, they had exactly the same appearance as the Jacko he had encountered out on the asteroid some years before. Evidently they found it necessary to wear their space-gear even down here on Mars.

They came to a halt about five yards away. They were about two feet six in diameter, mounted on six short legs. Though the transparent windows were facing towards him he could see nothing of the creature inside.

For a long moment the human and the four Jackoes faced each other, then at length McCoy, deciding that at least they did not propose to fry him on the spot, made the next move. From his bundle of belongings he picked up a square of stiff board, painted white. On this he began to sketch in bold swift lines with a piece of charcoal. When he had finished he tossed the board towards one of the Jackoes. Like lightning the creature shot to one side, but after a moment it returned and appeared to regard it. What it saw was a replica of McCoy's original axe-brandishing sketch. The rest was something of an anti-climax, for no matter how astonished the Jacko might be at what he saw, no exclamations of surprise, no startled movements or changes of countenance resulted. Each Jacko scuttled over to look at the picture as it lay on the ground, then returned to its station.

McCoy retrieved the board, cleaned it and drew another sketch. Having submitted this for their inspection, he drew a third. His first sketch showed a space-ship landing, then he added indications of four round objects running towards it with a human figure among them. The next picture showed the ship blasting off again. His final drawing was an attempt to indicate that ships of the human space-patrol would not attempt to molest the Jackoes during their departure. There was naturally enough no visible reaction to this series of messages, and McCoy wondered how much of it was getting across.

At any rate, having once more retrieved his sketching-board he first displayed for their inspection his space-suit, then slung it over his shoulder, picked up his kit bag and other gear, and indicated, by taking a few tentative strides, that he was ready to accompany them. Two of the creatures scuttled ahead, leading him in the direction of the cliffs.

McCoy was kept for three days in a cave in the cliffs. Although he had come to meet them voluntarily, the Jackoes treated him as a prisoner. One of them stayed on guard beside him all the time. They did not respond in any way to his further attempts to communicate with them.

On the third day, just before sunrise, he heard the characteristic screaming noise of a space-ship making its descent. Immediately the Jackoes got ready to leave. One of them dragged McCoy's space-suit towards him. As soon as he had it on, a couple of them pushed him out towards the ship.

Although McCoy was more familiar than anyone else with Jacko fighting ships, he had never seen one of this type before. It appeared to be designed for transport work rather than as a fighting vessel. He was pushed and prodded towards its entrance, which he found barely large enough to admit his space-suited bulk. Inside there was a central passage or tube running towards the nose of the ship. It was also very narrow, and although it was provided with hand-holds—or were they claw-holds?—at intervals, these were not well adapted to human hands and feet, and he had a good deal of difficulty in climbing upwards.

He found himself at length in a semi-circular compartment which might have been intended for storage.

Almost immediately the ship blasted off.

The news of McCoy's undertaking was released to the press by Granville's department of U.N.O. as soon as it was known that the Jackoes had taken him alive to their ship.

The story caused a tremendous sensation. The more serious commentators, having first described the scheme as foolhardy or suicidal, and having passed a vote of censure on the officials who had allowed a courageous, honest, well-meaning but rather simple man to undertake such a duty, proceeded to speculate on the possible outcome.

They concluded that even if McCoy returned—which seemed to them unlikely—he could bring nothing more than a message of defiance from the enemy. After all, the writers pointed out, the only acceptable solution to the Jacko problem was to have them take themselves off somewhere else. Unless McCoy persuaded them to do this—and nobody thought he could—nothing would be changed. It was clearer than ever, said some, that a large-scale assault must be made on the Jacko fleet.

McCoy found that the atmosphere in the storage compartment was suitable for human consumption and so he was able to exist without his space-suit.

While the ship coasted outwards away from Mars, he made several attempts to communicate with his captors by means of sketches, but got no response. One of the Jackoes—still encased in his metal sphere—occasionally brought him what appeared to be food, but McCoy regarded the stuff with mistrust and used his own supplies.

Having accelerated hard for some hours, the ship cut its drive and coasted outwards for nearly three weeks.

McCoy, unlike most people, had been so long accustomed to no-gravity conditions that he liked it.

At length, a long spell of deceleration followed by a number of other unidentifiable manœuvres informed him that the ship was reaching its destination. A series of short bursts from auxiliary motors, and several sideways and upwards moves, were followed by two or three hours of complete quiet.

Then the door of his compartment opened and one of his captors entered. By the simple process of dragging McCoy's suit over towards him the Jacko managed to make his requirements sufficiently clear. McCoy put the suit on. He followed the Jacko along the ship's central tube and through the outer hatch. Outside there was black space—blacker than usual, for no stars were visible. McCoy then realised that he and the ship that brought him were inside the hold of a gigantic vessel. He saw the shadowy outline of other ships lying, row upon row, alongside. Looking in another direction—down between his feet as it happened—he saw a square patch of sky studded with stars. This was a huge open hatchway and he noticed that the stars in this patch were all moving swiftly across it, from which he deduced that the huge ship to which he had been brought must be spinning on its longitudinal axis.

Something gripped him by the waist and he was towed across an intervening gap to a ledge or shelf. Here several space-suited Jackoes were scuttling about, evidently making the ship secure.

His guide led him through an air-lock—all the doorways through which McCoy passed were low half-circular openings through which he had to crawl on hands and knees—into the body of the ship. From there he was conducted along a great many passages, to a compartment which appeared to have been specially rigged up for him. Here he was left.

He took off his suit, having found that the air was breatheable—actually it seemed to be rich in oxygen. The longitudinal spin on the ship provided a light gravity and there was a couch in one corner of the room. McCoy made himself comfortable.

Twenty-four hours passed. McCoy lay on the couch with his hands beneath his head. He lay motionless for hours at a time. Whatever thoughts passed through his mind, no outward sign of fear, or discomfort or nervousness was to be seen. It would perhaps be wrong to say that McCoy had forgotten the meaning of fear, but at least he had grown so used to it that he could live with it and disregard it.

The half-round door of his compartment opened, swinging upwards on its hinge. Something crawled through the opening and stood erect—a man.

McCoy still lying on his couch, turned his head and looked at his visitor. His expression did not change. The man was dressed only in a pair of shorts. His head was shaved and his complexion was extremely pale, almost green in colour.

"Come right in and tell me about yourself," McCoy invited.

The man hesitated. "You got any cigarettes, sir?" he asked.

"Sorry," McCoy shook his head. "I don't smoke. Been her long?"

"I reckon it must be getting on four years now. I was in the destroyer *Antrobus*. Remember her? When she blew up I found myself floating in my space suit. The Jackoes came along later to see what they could rake out of the debris, and they raked me in. I've been here a long time now, sir. Glad to see another human."

The man talked in a rapid, nervous way, and his head jerked every so often, as if pulled by a string.

"How d'you get along with the Jackoes?"

"They're O.K., sir, except they're most enormously conceited. They think they're Nature's finest bit of handiwork, specially created to manage the universe. They've been training me to be an interpreter"

"Ah!" McCoy exclaimed. "Now I understand. You talk their lingo then?"

"I ought to," the man said. "I've been kept busy learning it all the time I've been here."

"And someone's coming to talk to me presently?"

"That's right, sir. I've been ordered to give you a preliminary briefing, like."

"Good enough. Go right ahead. But tell me first, what's your name?"

"Watkins, sir. I've been ordered to tell you, for a start, that these Jackoes come from a planet some considerable number of light-years away, or rather their ancestors did, for they've been travelling for thousands of years, livin' and breedin' and dyin' in this collection of ruddy great ships. It seems their ancestors discovered their sun was on the point of blowing up, so they built this fleet of ships. I reckon they built them in orbit round their planet—marvellous great ships they are, each one just like a city. Well, before their sun exploded they pushed off into space; thousands and thousands and thousands of the little so-and-so's. I've not been able to work out how long they've been travelling, but it's been thousands of years, hundreds of generations.

"You've got to get this idea straight, sir," Watkins continued earnestly. "Their ancestors knew about our planets, knew they were habitable and promised them to their descendents. Earth, Mars and

Venus are their promised lands. They've got religion, sir. I guess the poor devils needed it to keep them straight all them years out in space, and this religion says our planets are theirs. Their ancestors promised it and they've come here to take over. They even reckon that if they failed they'd be letting down all the Jackoes who died out in space in order to get here. They've got pretty fixed ideas on this, and you've got to understand that before you start arguing with them."

"That certainly throws a new light on the subject," McCoy pondered. "What do they think of us humans?"

"Not much, sir. Until recently they've been too conceited to trouble to find out a lot about us, but it's clear they think we're a lot of savages."

At this point the half-circular door opened again, and a couple of Jackoes came into the compartment. This time they were not encased in space suits, and so McCoy at last had the chance to see what a Jacko really looked like.

The biologists had been only approximately correct in deducing that a Jacko must resemble an octopus. They had round bodies supported on six short muscular legs. The head was about the size of a football, half protruding from the body. The mouth was small and bird-like, and above it was a pair of feelers which looked rather like a long carefully-waxed moustache. The entire Jacko head, body and limbs were black—a rich, glossy, shiny black. The eyes were the most fascinating item in the Jacko make-up; they were large, expressive and soulful looking. McCoy reminded himself that this expression would probably remain unchanged even if they proceeded to carve him up alive into small chunks, but nevertheless it gave the Jacko a quaint appealing attractive appearance.

So these are the Jackoes, McCoy thought. A great deal of his life had been concerned with them. He had hunted them, fought them, killed considerable numbers of them, sometimes run from them, discussed and argued about them interminably, even dreamed about them at times. Now that he saw them at last he felt that they were a pretty ordinary sort of monster by comparison with the creatures that had occupied his imagination all these years. With their big round soulful eyes they were even slightly comic.

McCoy chuckled. "So these are the Jackoes!" he grinned to himself.

One of the visitors made a sharp rattling noise. Often enough out in space McCoy had heard this fast clicking sound coming over the radio, and he recognised it as Jacko speech, but now observed that the sound was not genuine speech; it was made by the brisk tapping

together of the horny tentacles above its mouth. The string of noises had a rapid complex rhythm, and varied in their nature between a click-click to drum-tap.

"They say you're to stand up," Watkins told him anxiously.

Perhaps a professional diplomat like Granville would have handled this encounter according to some rule. McCoy had no plans; he had not even thought the matter over. He simply continued to speak and act according to his own nature.

"Tell them I don't take orders from them," he said.

"You mustn't answer like that, sir," Watkins protested. "They're a mighty proud people."

"I'm a mighty proud man myself," McCoy said. "Tell them that."

He had been wondering how Watkins would manage to reproduce the clicking and tapping speech of the Jackoes. His method was quite simple. He used a pair of hollow sticks about a foot long, tapering in diameter from two inches to a quarter inch. A variety of tone was obtained by tapping them together, sometimes near their base, sometimes at their tips. One of the Jackoes rapped back an answer.

"He says you must obey orders," Watkins translated anxiously.

"Say I came here voluntarily and I am not a prisoner. I came to hear what they had to say. If they won't get down to real talk, tell them to shove off and send someone who will, or else set me back home again."

"You're making a big mistake, sir," Watkins warned him, but he delivered the message and the Jackoes answered at once.

"If you don't obey you will be killed."

"Tell them I knew I ran that risk when I came but that I've got the laugh on them for I'm only a single guy and I've killed fifty-seven of them already."

"You really want me to say that, sir?" Watkins asked.

"Sure. Go ahead."

Watkins said it. The two Jackoes talked this over together. It sounded like a brisk conversation between two typewriters.

"Tell them again that I came here because we guessed they wanted to talk," McCoy said. "Tell them to say what they want, or fetch someone who's big enough to do some real talking."

Watkins, a harried and anxious being, did as he was told, and surprisingly enough the two Jackoes left. It seemed that McCoy's diplomacy—or lack of it—had won him some supremacy.

A day passed, then Watkins returned in company with another Jacko—at least McCoy thought this one was larger and perhaps older than the other two. Conversation began at once.

"This fellow is governor of one of the big ships," Watkins explained. "That's a pretty important position, like being governor of a city, with very wide powers. He asks whether you are the man with the axe."

"I dunno," McCoy said. "Am I? Oh, I see! He wants to know if I'm the man who drew this picture." He went over to the bulkhead and sketched the famous diagram of the space-suited figure with the axe, astride the space-ship.

"That's the thing," Watkins agreed. "Are you the man who fought a Jacko out there on one of the asteroids?"

"I did," McCoy agreed. "Some years ago."

"This Jacko here reckons he's the one you fought."

"Well, well!" McCoy exclaimed, addressing the Jacko directly. "It's a small universe, isn't it? Tell him I got a reprimand from my C.O. for being so dam' soft."

"He says he and some others wanted to meet you. He knows you're a great fighter and thinks you must be a great leader among humans."

"Tell him I'm not . . . Tell him that fighting is not one of the most highly respected occupations among humans. Say I've only come here as a go-between and the quicker he gets down to solid talk the better."

There followed after this a lengthy period of very difficult verbal exchanges between McCoy and his former enemy. They were difficult because the Jacko turned out to be just as tough and combative and unyielding in character as McCoy. The two belaboured each other with words almost in the same way as they had chopped at each other with axes some years previously, and the anxious Watkins was kept busy trying to translate expressions like: "Tell him to go climb up his own jets."

But they did succeed in getting each other's point of view across. The Jacko explained that many of his race held uncompromisingly to the view that these planets were theirs. Their ancestors had promised this. They were entitled to take them. The most orthodox among them were demanding that a full-scale landing be made on Earth with the object of occupying it. The advocates of this move held that if they proceeded faithfully to carry out the intentions of their ancestors they could not possibly fail. Others, on the contrary, realised that such a project would be carried out against hopeless odds and must certainly fail, but this group considered that circumstances might later change in their favour. A third group believed that if mankind were told the facts—the facts as the Jackoes saw them, that is—they would accept them and be content to be ruled and governed by the Jackoes.

McCoy laughed this last proposal to scorn. He told the Jacko there were three main trends of thought on Earth ; one, to launch an all-out attack for the purpose of obliterating the Jackoes ; the second, to continue the present skirmishing till the Jackoes grew dispirited and quit ; and the third, to present the Jackoes with sufficient fuel-material and other supplies so they would be able to return home.

In reply the Jacko said his people had no home to return to, for their star had exploded thousands of years ago, and the fuel required to accelerate their great fleet of ships would amount to the total resources of a planet.

"So there's no way out," McCoy concluded. "This everlasting war goes on till we humans get sick of it and make the necessary effort to destroy you."

"Or until my people rediscover sufficient of their lost technology to produce weapons powerful enough to conquer you," the Jacko retorted. "A great deal of our science has been forgotten in space, but don't forget we are older and wiser than you."

The rest of the discussion only served to simplify and clarify the problem, to boil it down to its tough insoluble essentials.

After his Jacko visitor had gone, McCoy lay on his bunk with his hands behind his head as usual, and contemplated the situation. He was able to see the answer to it quite clearly now. No hard thinking was needed to do so, for all of a sudden it was there, staring him in the face, and raw, tough and indigestible it was. He realised how inevitable this solution was ; in time it would have been reached anyhow by someone else if he had never come out here, even if he had never existed, for it was unavoidable and inescapable in the circumstances. He was sure that humanity—and the Jackoes also—would for some time refuse to accept it, for it would be equally distasteful to both. A great deal of persuasion by people more skilled than himself would be necessary to make them face it, but face it they must in the end for there was no alternative.

The Jackoes could not leave the system and could not conquer it ; humanity could not subdue the Jackoes and could not (or would not) destroy them. Very well, the Jackoes must be received down on Earth and the other planets as citizens with equal rights. They and humans must learn to get along together. It was as simple as that.

"But can we trust you ?" his Jacko visitor asked him when he said this.

"Can we trust you ?" McCoy retorted. "We must risk it and so must you."

"My people will detest the idea," the Jacko said.

"So will mine," McCoy replied. "But I think in time your company will do us good." He recalled the impression of slick, self-satisfied glossiness he had disliked so much among the people back down on Earth. "They'll hate it, but they'll accept it in the end—and we should get along together all right in the long-run; we've got something in common with each other at least—a sort of pig-headed courage. We'll get along together all right, because we've dam' well got to."

In the end, they did.

Alan Barclay

Stories in this series were :

Only An Echo—New Worlds No. 22. April 1954.

The Real McCoy—New Worlds No. 34. April 1955.

The Single Ship—New Worlds No. 39. September 1955.

Rock 83—New Worlds No. 40. October 1955.

The Hot Potato—New Worlds No. 43. January 1956.

U.S. Comment on "Forbidden Planet"

From *Publishers' Weekly*, April 21st, 1956 : "The highest Bantam (pocketbook) sales figures for any 10-day period since November, 1951, were achieved last month by W. J. Stuart's "Forbidden Planet," a science fiction yarn that also racked up the highest 10-day sales figure for any 35-cent giant in Bantam's history. (This is the book that was the indirect recipient of a major MGM-Quaker Oats tie-in promotion in which 60,000,000 free tickets to the new MGM movie based on the book were given away in cereal packages)."

While the film is first-class magazine fiction readers should be warned that the book is almost pure corn (not oats!) . . . and this department understood that the book was taken from the film, not vice versa.



BOOK REVIEWS

If asked to name the enfant terrible among science fiction authors my choice would be Alfred Bester, narrowly ousting Ray Bradbury, the only other possible candidate for this role. *The Demolished Man* established his reputation as a writer of great power and ingenuity, but it is now clear that this was only a taste of this man's talents, and far better books were yet to come. For some time Bester's new novel has been waiting to see print. I believe it is due, after some postponement, as a serial "The Burning Spear" in the *Magazine of Fantasy and Science Fiction*, or will it be as "The Stars My Destination" announced as *Galaxy's* new serial? But, to their eternal credit, an English publishing house has been brave enough, or shall I say astute enough, to present in first hard-cover publication Alfred Bester's **Tiger! Tiger!** (Sidgwick & Jackson, 12/6). In my opinion it is a slightly tarnished masterpiece. It is a furiously paced story which can bludgeon the unwary reader into accepting it on first impression as one of the most significant and spectacular novels ever written in the genre. When the first shock of wonder has worn off, and the pulse has quietened down, it might seem that Mr. Bester, perhaps with tongue in cheek, had resolved to write *the* science-fiction novel to end all such novels. Clearly it was intended that anything new based on psi powers after this would be an anti-climax.

The author secures this illusion by packing into the story practically every device known to "psience-fiction," plus a few original twists of his own; by consummate skill in story plotting by which interest is fixed in the very first page and is never relinquished through each succeeding chapter climax; and by the creation of a central character, Gully Foyle, as powerful as any I have encountered. Incredibly larger than life, this fantastic figure moves through Hogarthian situations engineered against an ingeniously detailed background plausibly constructed on a basic premise of a future solar civilization in which mankind has developed the ability to teleport. Gully Foyle is a shipwrecked spaceman—a clod of a man, tough and powerful but of low

intelligence and ability. Unexpectedly spurned by a possible rescuer, he is transformed into a figure of terrifying vengeance.

The author's forte is literary shock tactics—dramatic sentences, completely amoral characters, lacings of sex, and descriptions of mental torture. Horrific scenes such as Foyle's capture and transformation by the Scientific People, the induced hallucinations in the Nightmare Theatre, the fantastic escape from the Gouffre Martel prison, Baker's Freak Factory and the removal of Gully's tattooing, and the discarding of Jisbella is the climax to Part One. Gully Foyle's remarkable change of character is emphasised as Part Two continues. The incredible Fourmyle's Circus, his even more incredible physical transformation into super-man at the hands of a Mars Commando Brigade surgeon, and his contacts with the women in the story are quite extraordinary. The beautiful negress *telesend* Robin Wednesbury, Jisbella the other foil in the inimical intrigue, and that creature of fantasy, the blind albino lady Olivia, with her extra-sensory perception of heat waves, are all treated most cavalierly by the brutally direct Gully.

Bester creates mounting tension in Foyle's search for the spaceship *Vorga's* captain, and horror piles on horror as the various crewmen are interrogated and destroyed (the scene in the catacombs of the Sklotsky Colony with the child telepath are particularly grim). The closing net of the Outer Planets agent and the might of the Presteign Clan are overshadowed by the menace of PyrE, a stellar-explosive fission material, activated by thought-control. The problem now is to bring this conglomeration to a satisfactory finale. Bester once more indulges his original idiosyncrasy in describing thought-sensations, by way of a typesetter's nightmare, and the crucial scene in St. Patrick's Cathedral is magnificently done. Then somehow the author loses his grip on his creation. Foyle's stimulus for revenge has been removed, and he is given an out-of-character realisation of the problems facing mankind over PyrE and imminent space-jaunting for all ("Am I to turn PyrE over to the world and let it destroy itself? Am I to teach the world how to space-jant and let us spread our freak-show from galaxy to galaxy through all the universe?"). This is the author blatantly intruding after letting his fanciful characters parade their phantasmagoria through most of the book.

Bester throws the solution back into the face of mankind by distributing the PyrE throughout the world (presumably the moral is that if Man continues in evil thinking, the PyrE—Man's inventions—will destroy him). Fair enough, but then Bester space-jauntes himself into the ultimate pronouncement "Faith in Faith" and the meta-physical gyrations of Gully Foyle terminate in his original womb, the spaceship *Nomad*, where the Brethren await the Awakening. It is as though

Olaf Stapledon had finished a manuscript by Heinlein and Kornbluth and Spillane. But this is rather unfair, because *Tiger! Tiger!* is pure Bester, and as such must surely take its place among the top ten science-fiction novels of all time.

The other novel this month is respectably "mainstream." David Duncan's **Another Tree In Eden** (Heinemann, 12/6d)—published in the U.S.A. as *Beyond Eden*—combines a smooth literary style and scientific discovery to achieve a considerable improvement on his first science-fiction novel *Dark Dominion*. The theme is rather similar—a scientist in an American government project, this time the Neptune Authority which is purifying and piping some of the waters of the Pacific Ocean to irrigate the dry Western State of the U.S.A. Microbiology is the particular science with which Mr. Duncan develops the plot with restrained excitement. An unknown factor in some of the water is found to have strange and dangerous effects, and the project is soon under fire from a witch-hunting Senator (an excellent character this, although deriving much from McCarthy). The scientific background is excellent, and the adult style and characterisation add up to a most interesting and readable novel.

One of the most handsome volumes of "popular" science ever to come my way is **Scientific Wonders Of The Atomic Age** (Macdonald, 15/-). Profusely illustrated with photographs, coloured plates and diagrams, its large-size format ostensibly places it in the juvenile market. Indeed the editorial note (by John W. R. Taylor to whom congratulations are in order) is addressed to the young people of to-day from whom must come "the scientists, engineers, airmen and explorers of the atomic age." Yet these clearly written elementary approaches to the technological developments of the past decades—presented as a series of essays by experts in the various fields of research—are of sufficiently high standard to warrant serious study, and no little degree of comprehension, by the average intelligent adult. Such is the tempo and potential of the recent enormous strides in fields which greatly affect all our present existences and our possible futures—atomic energy, aeronautics and astronautics, electronics, astronomy and cinematography, etc.—that it would not be a bad idea if more laymen read this kind of book. For those with the inclination here is the opportunity to understand a few of the basic ideas which have truly turned the 20th century into a wonderland of science.

Leslie Flood

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